North York Moors

NATIONAL PARK

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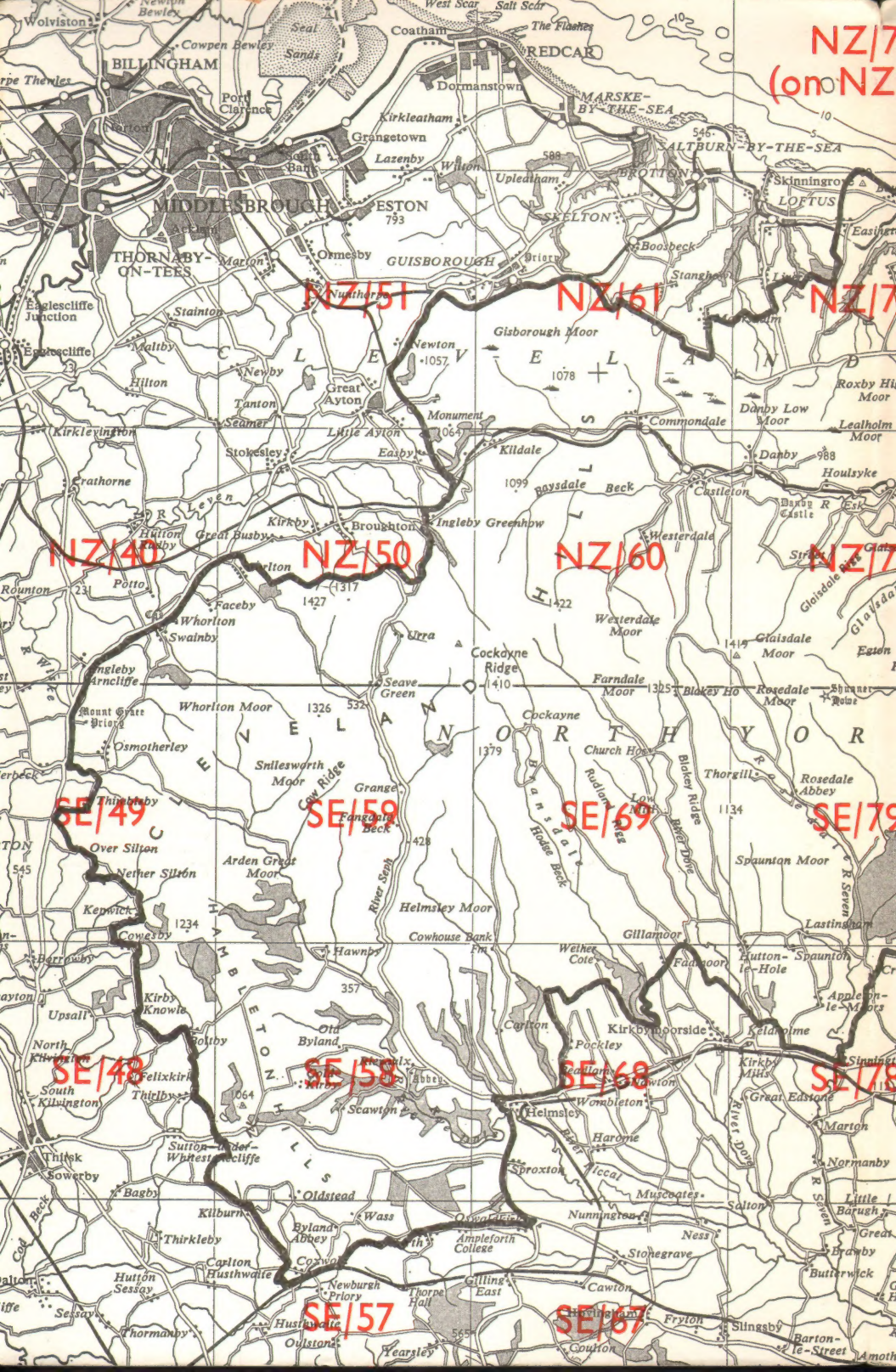
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Nunthorpe
Stainton
Newton
Gisborough Moor
Great Ayton
Little Ayton
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Urra
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Seave Green
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Whorlton Moor
Mount Grace Priory
Osmotherley
Cockayne
Church Hos
Thorgill
Rosedale Abbey
Snilesworth Moor
Cow Ridge
Grange
Fangdale Beck
Rudland Rigg
Low Mill
Blakey Ridge
Bransdale
Hodge Beck
River Dove
Spaunton Moor
Thirlsby
Over Silton
Nether Silton
Arden Great Moor
Kepwick
Cowesby
Helmsley Moor
River Seph
Cowhouse Bank
Hawnby
Gillamoor
Fadmoor
Hutton-le-Hole
Spaunton
Lastingham
Appleton-le-Moors
Kirkby Knowle
Upsall
Old Byland
Byland Abbey
Kirkbymoorside
Keldholme
Carlton
Pockley
Scawton
Wombleton
Great Edstone
Kirkby Mills
Marton
Sinnington
Helmsley
Harome
Sproxton
Normanby
Muscoates
Nunnington
Ness
Stonegrave
Bransby
Butterwick
Little Barugh
Great Barugh
Solton
Sutton-under-Whitestonecliffe
Thirsk
Sowerby
Bagby
Kilburn
Thirkleby
Oldstead
Wass
Byland Abbey
Ampleforth College
Carlton Husthwaite
Coxwold
Newburgh Priory
Thorpe Hall
Gilling East
Cawton
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NORTH YORK MOORS NATIONAL PARK

ORDNANCE SURVEY 2½ INCH MAP SHEET NUMBERS

The Ordnance Survey One-Inch Tourist Map "The North York Moors" covers all the Park.

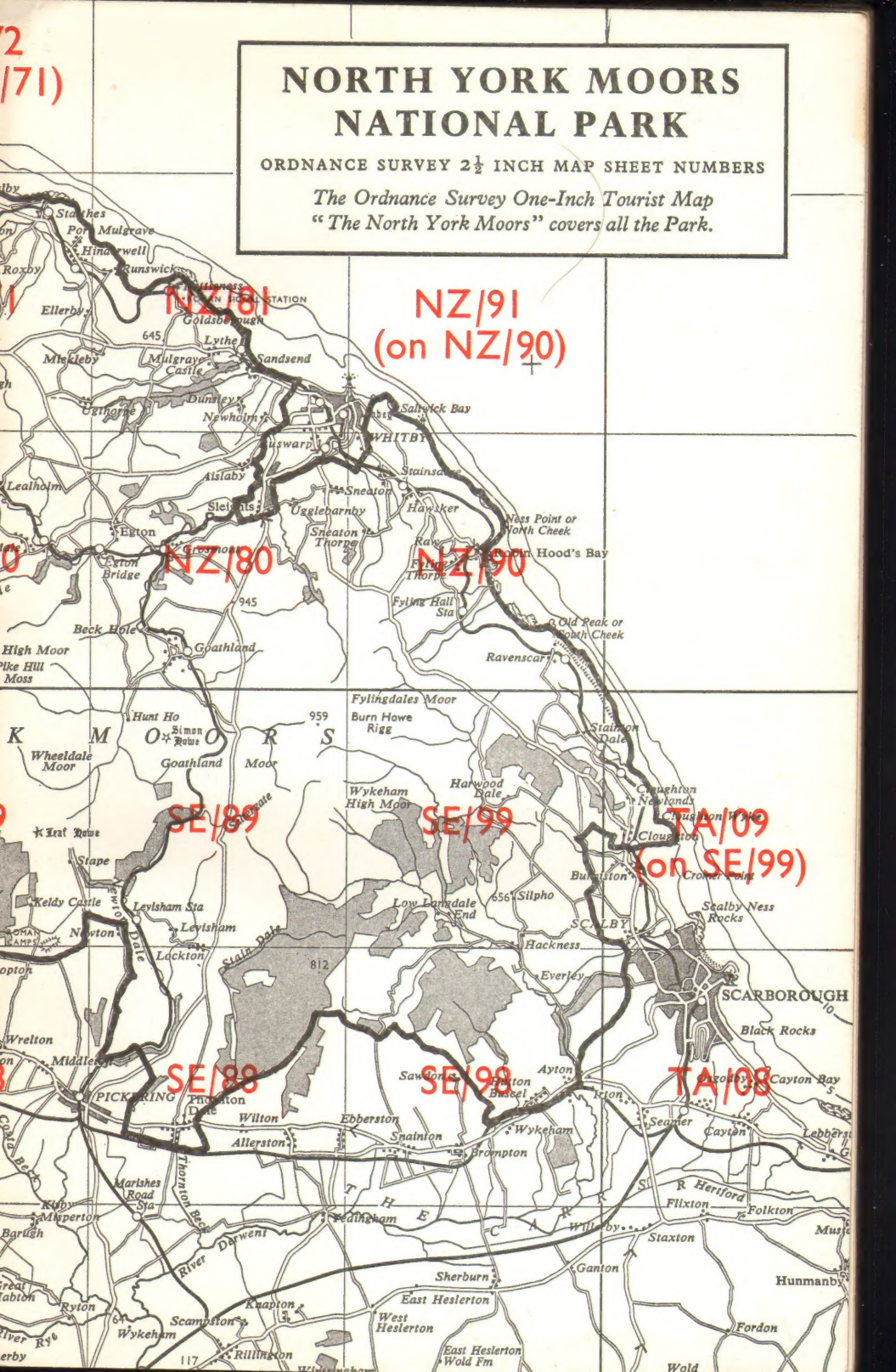

PLATE I. Kirby Knowle and Thimbleby Moor: Farm, Dale and Moors

NORTH YORK MOORS

NATIONAL PARK

NORTH YORK MOORS

NATIONAL PARK GUIDE No. 4

EDITED BY
ARTHUR RAISTRICK, M.Sc., Ph.D.

ISSUED FOR THE
NATIONAL PARKS COMMISSION

LONDON
HER MAJESTY'S STATIONERY OFFICE
1966

This guide-book was prepared in collaboration with the North York Moors National Park Planning Committee under the editorship of Arthur Raistrick

PREFACE

THE North York Moors is one of the ten areas in England and Wales which have been designated as National Parks, defined by the National Parks and Access to the Countryside Act, 1949, as areas which, by reason of their character and their situation in relation to centres of population, should be the subject of special measures to ensure the preservation and enhancement of their natural beauty and the promotion of their enjoyment by the public.

The North York Moors fully complies with this specification. It contains some of the finest landscape in the country and a variety of scenery rarely encountered within one region. It comprises principally high, undulating moorland, rising steeply from the Plain of York in the west and sweeping across to the coast in the north and east to fall to sea level in cliffs which in many places are of dramatic ruggedness. It contains picturesque inland and fishing villages, and within or close to its boundaries are seaside and country resorts, with good accommodation for visitors, which are attractive in themselves and also are ideal starting points for excursions in the National Park. Its situation renders it easily accessible from the large centres of population in the North-east and in the West Riding, and this accessibility and the character of its landscape combine to provide an area of incalculable value to the community, for the visual enjoyment of fine scenery and for the physical enjoyment of it in healthful recreation in beautiful surroundings.

The designation of the area as a National Park has placed upon the County Council the duty—which it discharges through the North York Moors National Park Planning Committee—of preserving this beautiful region and facilitating its enjoyment by the public. In doing these things the Committee are mindful of the interests of those who have to live and work in the area, and in co-operation with the National Parks Commission they are striving to impress upon the visiting public the vital necessity of respecting those interests. In this connection the attention of readers is drawn to the 'Country Code' which appears at the end of this guide-book; a code of behaviour drawn up by the Commission, which if observed will bring about an understanding and goodwill between those visiting the National Park for pleasure and those who depend upon it for their living.

The object of this guide is to present a balanced description of the National Park: its scenery, geology, natural history, human settlement, and its use and occupations. It is not presented as just a conventional

guide-book for the holiday-maker, but as a more detailed guide to appeal to those having a deeper interest and wishing to know more about the area than is apparent on a first acquaintance with it. There is much to be seen, and those who, armed with the one-inch Ordnance Survey Tourist Map, will take the trouble to study the Park with the aid of this book will find a great deal to interest them. My Committee and the National Parks Commission are grateful to the Editor and those who have contributed to it.

R. J. L. JACKSON,
Chairman, North York Moors
National Park Planning Committee

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ACKNOWLEDGMENT

We are much indebted to all who helped with the preparation of this Guide, particularly to the authors of the special articles which bear their names. We also wish to express our thanks to Miss Joan Emerson for preparing maps 2 and 3 and the drawing for Fig. 2; to the Department of Geography, University College London for preparing the map of Domesday Settlements reproduced as Fig. 1, and to the Ministry of Public Building and Works for preparing the list of Scheduled Ancient Monuments for Appendix I.

Our thanks are also due to the photographers named below whose work is reproduced in this Guide:

G. F. Allen for Plate XXVII, G. Douglas Bolton for Plates XVI and XXIII; Forestry Commission for Plate XXV (Crown Copyright); Leonard and Marjorie Gayton for Plates XVIII and XIX; Eric Hosking for Plates IX and X; J. K. St. Joseph for Plates XVII, XX and XXII (Crown Copyright); R. L. Shaw for Plates III and XI; W. Eglon Shaw for Plates VII and XXI; Bertram Unné for Plates I, II, IV, V, VI, VIII, XII, XIII, XXIV and XXVI, and Vincent J. Watson for Plates XIV and XV.

The cover illustration is of Staithes and is reproduced from a photograph taken by Noel Habgood.

I

General Description of the National Park

by ALEC WRIGHT

THE North York Moors National Park has 553 square miles of upland, mainly heather-clad, enclosing many small dales in which nestle villages and historic sites, and in and around which an active rural life is centred. Nearly all entries to the Park involve a climb from the plain onto the upland and this steep 'edge', with the coast on the east side, make this one of the best defined of the ten National Parks.

Climbing the Helmsley road on the steep northern face of the Cleveland Hills, which stand as a rampart above the agricultural plain, rural Cleveland is at our feet. Ten miles away glides the great river Tees, threading a huge connurbation. To the east gleam Redcar sands, the Tees estuary and the Durham coast beyond. Westward, through the smoke of Darlington, are the Pennine uplands.

Looking from the tumbled Wainstones—a popular rock-climbing rendezvous—we survey these hills at whose foot is the northern boundary of the Park. The long rounded tops of Cold Moor, Cringle and Whorlton Moors run to the west, but after the glacial gap of Scarth Nick, the escarpment turns south-west and south, now very steep above the ruins of the Carthusian Priory of Mount Grace and the level miles of the Vale of Mowbray. Now the bare Clevelands melt into the softer Hambleton Hills, their flanks tree-covered and graced by pretty stone-built villages. The upland is bordered by the old green Drove Road, which, striding along Whitestone Cliff, overlooks Gormire (Plate 11), one of Yorkshire's three natural lakes, and cuts across the spectacular cleft called Sutton Bank. Westward are long-range views stretching half-way across England. On the east the bleak plateau around Cold Kirby mingles with the loveliness of deep interwoven valleys and gills around Arden, dominated by the twin hog-backs of Hawnby and Easterside Hills. The road from Thirsk up Sutton Bank is busy with traffic. We could turn with it towards Helmsley, but it is more pleasant to wander on the exhilarating plateau where horses have been trained for nearly three hundred years, or watch the gliders dip into space from the precipitous cliff. It was here at Scotch Corner that Edward II fled from the Scots in 1322. Before recorded history men lived and died on these heights which now appear so inhospitable. Some visible link with

the prehistoric past is always close at hand. The memory of those mysterious people who reared their earthworks and tumuli permeates every mile. Small wonder that hobs, ghosts and fairies flourish in local legend.

By Roulston Scar, above the White Horse of Kilburn cut into the limestone, descend to Coxwold, a picturesque village of exceptional architectural merit on the edge of the Gilling Gap, the limit of the Park. Here lived Laurence Sterne, the jovial author-cleric.

Across the meadows only a mile to the north-east is the lovely fragmentary west-end of the Cistercian church of Byland Abbey whose builders settled here in 1177 after thirty years of indecision on the neighbouring higher ground. From Byland, to join the A.170, go by the steep Wass Bank, or follow the valley road along the Park boundary passing Ampleforth College, a leading Roman Catholic school. Through Oswaldkirk, turn quickly north dropping down to Helmsley as the long vale of the Rye unfolds. In the distance are the far undulations of the swelling moors with white ribbons of roadways disappearing into the blue. Helmsley might well be called 'The Gateway to the Park'. Its spacious Market Place is busy with tourist traffic, yet it is almost mediaeval in character, with the battered Norman keep of the Castle towering up. The Georgian inn, part half-timbered, and the worn steps of the Market Cross indicate an ancient town, and the huge Palladian mansion of Duncombe Park to the south-west recalls the vast estate which stretched from one end of the National Park to the other.

The Scarborough road (A.170) keeps fitful company with the Park for most of its length, crossing in turn the many streams which fall from the high moors. It is these streams, rising on the watershed, that determine the characteristic aspect of the region. They descend on either side of this elevated ridge, perhaps best known at Ralph's Cross (1,409 feet), feeding the Esk on the north and the Rye on the south-west, both flowing eastwards, but the Rye, meeting the river Derwent leaves its eastward course, eventually to empty into the Humber. Roads crossing the watershed are few, there being only three suitable for motor traffic at Bilsdale, Blakey Rigg and Saltergate. The dales of Westerdale, Danby, Fryup and Glaisdale running north to the Esk are small and narrow. Those to the south are much longer, eventually merging into the long ago drained lake of Pickering skirted by A.170. Lesser roads, climbing through stony fields, branch to the north but suddenly, dramatically and without warning, the ground falls away to the distant panorama of the seemingly boundless moor. Cloud shadows cross the dark troughs of the narrow valleys of Riccal Dale, Kirk Dale, Douthwaite Dale and Sinnington which follow in quick succession, cutting deep into the limestone uplands that extend from Sutton Bank to Scarborough. Once through the

limestone, the ravines broaden into the cultivated valleys of Bilsdale, Bransdale, Farndale and Rosedale. There are many 'surprise views' from these heights, each meriting Keeble's lines incised on the wall of Gillamoor churchyard above Farndale.

At the bracken-hidden Roman camps at Cawthorne (see page 37) we are far above the new green carpet of Cropton Forest. To the east is the Ice-Age channel of Newton Dale and above the curious Hole of Horcum glints the Whitby-Pickering traffic on the Saltergate road. The much publicised village of Thornton Dale is just in the Park. Eastwards, because of the activities of the Forestry Commission, the landscape is changing. We notice the colour mostly; brown and purple turning to dark green as the Commission's conifers veneer the hillsides. Recently, a wider planting of hardwoods and 'amenity trees' has introduced a greater variety of colour and texture. The beck in Thornton comes from High Staindale where the Bridestones, wind-sculptured rocks, are one of the few National Trust properties in North Yorkshire. The Park borders Dalby Forest, near the mysterious Scamridge Dykes and Wykeham Forest. By the ruined tower of West Ayton Castle, the Forge Valley leads to the secluded village of Hackness. Scarborough is almost in sight and from the edge of Suffield Moor the Castle ruins and the North Bay can be plainly seen. The Park boundary drops to Long Nab at Cloughton, whence northwards for almost thirty miles stretches the coast line. On the far side of Jugger Howe Beck, north-west of Cloughton, is Fylingdales Moor, extending towards Goathland, and site of the Ballistic Missile Early-Warning Station.

The coast walker can ramble by fieldpath and by-way the full distance from Scarborough to Staithes. The coastline is broken by Robin Hood's Bay, once a thriving fishing village, and the exhilarating cliff walk may be resumed at Sandsend, passing the site of the Roman signal station at Goldsborough (see page 38) to picturesque Runswick Bay. Extremely inviting is the ravine of the Roxby Beck which falls into the sea through the deep fissure at Staithes. Staithes hamlet is so precariously wedged into its narrow crevice that it has no soil or space for gardens and floral decoration. It grew up as a fishing village but now its quaintness and unique position are attracting more and more of the tourist trade. (Plate IV). Boulby Head (660 feet OD) just to the north has the highest cliffs on the east coast, and is crossed by the 'street' which links together the Roman signal stations.

From the coast a belt of rich cornland rises by Handale Abbey to the moor road (A.171) which the road from Staithes joins near the conical Freebrough Hill. To the north-west is the industrial corner of Cleveland scarred by extensive ironstone workings (see page 59). Fortunately the moorland has remained almost unspoiled except for the hillsides about

Guisborough where the Elizabethan alum mining was commenced (see page 57) and at Hutton Gate to the south where early ironstone mining wrought havoc. From nearby Highcliff Nab, Hutton Moor forestry tracks lead south-east to the popular landmark of Roseberry Topping, a denuded cone of rock which sticks up like an exclamation mark. Great Ayton Moor to the east affords a fine high-level walk across to Easby Moor where Captain Cook's Monument is a prominent landmark. This walk is abruptly interrupted by the fine gorge of the river Leven. Field paths to the village of Ingleby Greenhow cross the tumbled gravel mounds which are a relic of the Ice-Age.

Let us explore the shadowed bowl of Greenhow, climbing the steep Jackson's Banks now threaded by forestry tracks to the highest point of the Park on Urra Moor (1,489 feet). On the 'tops' a man may walk all day and never see his fellow, keeping a fifteen-mile direct line above the 1,000-feet mark from Whorlton Hill eastward to Wheeldale Howe except for one drop at Haggs Gate. The only signs of humanity are the shooting butts, or perhaps a stone boundary post, or a moorland cross for there are many in these parts. From this elevated ridge we may see the formation of the valleys. The dale heads on the north are steep and rocky; those of the longer southern dales have a more gentle slope bearing an infant beck whose banks hang deep with heather and bilberry. In autumn they are aflame with russet bracken and red rowan; in winter, gaunt with frozen, muted waterfalls.

The valley floors are chequered by little green fields dotted with red roofed brown farmsteads sheltering under dark green sycamores. In August the moor is endowed with regal purple, a cloak full forty miles wide, but later the purple fades to indigo and a December landscape can look like a black and white etching. By April, pale primroses flood the banks, whilst May lays a carpet of bluebells, delightfully mingled with pale larch green, but it is in Farndale, when the banks of the little river Dove bloom with sheets of wild daffodils, that colour is most exhilarating.

Compact villages in the dales are unknown, for most of the dalesfolk occupy scattered farms adjacent to the moor. Today, the very isolated farms are not in demand. Until recent years the moors bred a self-supporting community, content with their native dale, whose members reared sheep, cultivated the intakes, and built byres and homes of native stone, travelling occasionally to market and more often to chapel or meeting-house. At the 'back-end' they brought down the peats from the moor and laid in stocks of wood for fuel, for the snows might come, blocking the farm roads for weeks together, when a belated traveller could meet his end, bewildered and exhausted in a wilderness of white. Dreaded then—and now—is the fearful calamity of a moor or forest fire.

It is thus that the moors betray their complex character, fascinating, beautiful and terrible, quite unsuspected by the casual summer visitor. These opposing elements constitute the strong spiritual appeal of this powerful landscape, attributes which compel respect and affection.

Being easily accessible by rail or road the National Park affords all-the-year-round exploration, but it is the walker or horseman who may best enjoy the intimacy of the Park for he may wander almost where he will. Access is remarkably free but, if in doubt, a polite enquiry will usually open all gates.

The visitor may follow his hobbies without hindrance. Be he geologist or botanist every mile yields interest; the giant fossils of the lias cliffs or the tender Lily of the Valley in the oak woods. For the antiquarian there are tumuli, the standing stones, earthworks, mediaeval cruck cottages, ruined castles or the exquisite craftsmanship of Rievaulx or Byland Abbeys. For the naturalist there are badger-haunted woods or otter-ringed pools, red grouse, curlew and the crying sea-birds and for the artist and photographer there is subject illimitable.

For the walker who loves walking and exploring wild country, and needs no further hobby to enhance his experience, the North York Moors offer an ideal ground, big enough and varied enough in its many moods to test endurance to the full. All the skills of the outdoor adventurer can be practised in this piece of country. At the same time it affords innumerable shorter walks over easy moorland paths and down the many dales. Woodlands, waste, and cultivated land between them cater for all tastes. Solitude and wide stretches of open country are the heart of the Park, but its edges are rich in valleys and woods in which are to be found the lovely villages, abbeys, churches and castles which the least strenuous visitor can reach and enjoy.

Map 2. The Physical H

ackground of the Park

2

The Build and Shape of the Land

by J. E. HEMINGWAY

NORTH-EAST Yorkshire lies as an isolated upland block, rising sharply above all adjacent regions. To the south lies the flat-floored Vale of Pickering: to the west the gently rolling Vales of York and Mowbray, which swing north to join the low-lying land surrounding the Tees estuary: while to the north and east lies the North Sea. Coincident with this region, except for the northern ironstone belt, the Scarborough and Whitby districts and three small areas on the southern edge, is the North York Moors National Park.

TOPOGRAPHY

The North York Moors National Park embraces a number of highly distinctive and little related regions. It also includes and is dominated by one of the largest areas of moorland in England which stretches from Guisborough Moor in the north-west to the Hackness Hills in the south-east, and from Newton Mulgrave Moor in the north-east to the Hambleton Hills in the south-west.

Along the northern edge of the Park lies Cleveland, an ill-defined region usually regarded as lying north of the river Esk almost to the Tees, but also including the low-lying vale beyond the north-west limits of the Park. It derives its name from the cliffs of the region, and was originally restricted to what is now the northern rim of the Park. Its logical southern boundary is the through valley of the Leven-Esk, which effectively separates it from the main moorland area to the south. With the extension of the use of the term Cleveland, however, particularly during the nineteenth century, the Cleveland Hills are now regarded as that part of the great west-facing escarpment of the moorland block which extends from Kildale to Osmotherley. They rise up to 1000 feet above the plain to culminate in Urra Moor (1,489 feet OD) the highest point in the Park. Around the village of Ingleby Greenhow the escarpment forms a magnificent re-entrant which cuts deeply into the moorland block. Its steep and sometimes cliffed face may indeed justify its inclusion in Cleveland.

Apart from the Cleveland Hills, the main moorland area south of the Esk lacks a comprehensive name. The North York Moors, usually applied to the whole area, can only be regarded as a confusing misnomer. Many parts of the moors, each only a few square miles in extent, are named after the adjacent valleys or parishes, one moor merging indefinitely into another. Of these names only the notorious Fylingdales Moor enjoys more than local use. The old name of Blackamoor, extinct except in the form of the two widely separated Blakey Moors, was used in the seventeenth and eighteenth centuries for the eastern reaches of these moors. It could well be revived and applied to that moorland region which is bounded by the Esk, the Cleveland Hills, the Tabular Hills and the glaciated coastal belt.

This main moorland block reaches 1,422 feet OD in Stony Ridge where it abuts on to the Cleveland Hills. This high ridge continues eastwards to Cock Heads on Glaisdale Moor, for most of its length above 1,300 feet OD, and dales radiate from it to the north, east and south. They cut from 500 to 800 feet into the moors, and except for the eastward-flowing Wheeldale, penetrate rocks which favour agriculture. As a result these rich and protected valleys present a vivid contrast to the more austere moors above, into which they pass, usually through a belt of rock-falls and landslips.

To the east the moors are dissected by the north-south through valley of the Murk Esk and Newton Dale, which though reaching 580 feet OD at Fen Bogs, presents a relatively easy railway route across the moors from Pickering to Eskdale.

To the south of Blackamoor lies a belt of limestones and calcareous sandstones, which develops a strong north-facing escarpment. This rises up to 200 feet above the adjacent moorland, but falls gently south to the Vale of Pickering. Except for its northern edge this belt is mainly agricultural. To the west it forms the Hambleton Hills which rise to 1,307 feet OD in Black Hambleton, and which present a west-facing escarpment above the Vale of York. East of Ryedale the southern belt is known as the Tabular Hills. They broaden eastwards with continued loss of height; the isolated block that lies east of the river Derwent and which forms the Hackness Hills, rises to only 714 feet OD. The southern belt is dissected by nine small rivers, which drain south from the moorland dales and cut steep-sided valleys through the hills, dividing them into tabular blocks. Of these the two largest are the Rye and Derwent near the extreme west and east edges of the belt. Both these rivers drain relatively large areas and their valley-floors are sufficiently broad to carry roads.

The western escarpment of the Hambleton Hills rises 600 feet above the Vales of York and Mowbray. The tough cap-rocks of the escarpment

break through in places to appear as vertical crags of which Whitestone Cliff and Roulston Scar are best known. Between them lie broad semi-circular embayments, as at Sutton Bank and Cowesby, which mark the position of vast landslips, the debris from which occurs as grass-covered festoons at their foot. Elsewhere the tilting of large sections of the escarpment edge, many scores and even hundreds of yards in length, results in the opening of joint-fissures (gulls) parallel to the edge. The gigantic tilted (cambered) blocks may be seen in road cuts as at Kepwick Bank Top and Sneck Yate above Boltby, in some of the quarries on the escarpment edge and in natural exposures. The instability of the belly of the White Horse of Kilburn (SE 512811) is indeed caused by its position on a cambered escarpment face. Near the foot of the escarpment lies Gormire, one of the few Yorkshire lakes, formed by the damming of a glacial overflow channel by a post-glacial mud flow.

The coastal belt from two to nine miles wide is probably the best known region in the Park, being the focus of the holiday industry. One of its essential characteristics is its cover of glacial deposits which allows farming in localities where this would be otherwise impossible. In the sandy bays along the coast these glacial deposits reach the sea. Elsewhere vertical sea-cliffs extend south-eastwards far beyond Cleveland proper. They reach 700 feet OD at Rockcliff, at the northern limit of the Park, and at Ravenscar they exceed 600 feet OD. Elsewhere they are usually more than 200 feet high.

GEOLOGY

The geological history of the Park may be divided into two long phases of great geological activity separated by a still longer interval about which we have little information. During the first active phase those sediments which were to be the 'solid' rocks of the area were laid down as muds and sands, some in shallow seas, others in deltas and on tidal flats. This happened in Jurassic times, from about 180 to 140 million years ago, and it was followed by an interval of more than 100 million years. The final active phase which included uplift from the sea, shaping of the land and glacial modifications to that shape, moulded the rocks of the Park into their present form. During these times also the superficial deposits were laid down.

In all a thickness of rather more than 3,000 feet of sandstones, limestones and shales go to make up the solid rocks of the Park. They are not all exposed in any one locality, but because of the gentle folding and deep erosion that the area has undergone, they are varyingly though regularly distributed. The succession is as follows:

GEOLOGICAL SEQUENCE

SUPERFICIAL DEPOSITS

Recent:

Peat
Beach sand
Alluvium

Pleistocene:

Boulder clay, glacial sands and gravels, lacustrine deposits

SOLID FORMATIONS

Jurassic:

Upper
- Kimmeridge Clay
- Corallian Series
- Oxford Clay
- Kellaways Rock
- Cornbrash

Middle
- Upper Deltaic Series
- Scarborough Beds
- Middle Deltaic Series (with Millepore Bed)
- Eller Beck Bed
- Lower Deltaic Series
- Dogger

Lower
- Upper Lias (including the Rosedale Ironstone, Alum Shales and Jet Rock)
- Middle Lias (including the Cleveland Ironstone)
- Lower Lias

The Lower Jurassic Rocks

The Liassic rocks of north-east Yorkshire are mainly shales of varied types with less important sandstones and some ironstones of past economic importance. They underlie the entire area except where they have been cut through in the inland dales. They were laid down as muds and sands in an extensive, open sea which was favourable to marine life, with the result that these rocks yield many ammonites, belemnites and lamellibranchs, with rarer though even more striking marine reptiles. The early association of the Whitby area with these fossils resulted in

the adoption of ammonites in the Abbey crest in the fourteenth century as well as their incorporation into early local legend.

The abundance of ammonites in particular in these rocks and the great variety of their shape and ornament resulted in their use from the mid-nineteenth century as a method of subdivision of the Lias. This series of beds was subdivided into zones and later subzones, the thinnest subdivision being only a few feet in thickness, and each characterised by the presence of a distinctive ammonite.

In addition the Lias is subdivided on the basis of its lithological characters, by which the Lower, Middle and Upper Lias may readily be recognised.

The Lower Lias is best exposed at Robin Hood's Bay where shales with nodules and some fine-grained sandstones form the shore. Only the upper 850 feet of the entire 1,300 feet is exposed in the curving inter-tidal scars.

The Middle Lias averages only 150 feet in thickness and is divided into two main units, the Sandy Series below and the Ironstone Series above. The Sandy Series (70-110 feet) forms a subdued feature round the sides of the dales and particularly near Roseberry Topping north-east of Great Ayton. On the coast it is most readily seen near Staithes and at North Cheek, Robin Hood's Bay, where shell-beds covering many square yards are exposed. The overlying Ironstone Series is also highly fossiliferous. Although the Cleveland iron industry which was founded on the use of these rocks started at Grosmont (see page 60), and much ironstone was later worked within the northern limits of the Park, all mining has now ceased.

The Upper Lias (average 250 feet) was similarly in the past a source of economically useful products. Jet, a fossilized conifer, was mined from the Jet Rock, a black shale only 25 feet thick near the base of the Upper Lias, in which it occurs sporadically (see page 56). Old tips along the outcrop of the Jet Rock are conspicuous in the north-west region of the Park. In addition extensive mining was carried out along the coast. Alum working from the crisp and pyritous Alum Shales, near the top of the Upper Lias was mainly confined to the coast where three hundred years of sporadic working altered the cliffs at Runswick and Sandsend very profoundly (see page 57). These shales are most accessibly exposed at Whitby. The Rosedale iron industry, now also extinct, mainly exploited Upper Lias ores (see page 60).

The Middle Jurassic Rocks

Middle Jurassic times saw a profound change over the entire region. After a short interval, when the Liassic shales were gently folded and then eroded to a plane surface, sandy marine shallows developed wherein

the Dogger, a thin but variable ferruginous sandstone was laid down. These were soon overwhelmed by a vast delta which spilled up to 700 feet of silts and muds with some sand over the whole of East Yorkshire. Plants abounded in favoured localities, particularly on sandbanks and in the shallow swamps of the delta. Their roots may be seen as carbonised impressions in the sediment on which they grew: their leaves may be found in clays and silts, sometimes so commonly as to be called plant-beds, as at Gristhorpe, Cloughton and Whitby. Their remains also accumulated as thin but widespread coals, which were worked in the past by bell-pits and from shafts.

Across those deltaic swamps meandered rivers many hundreds of feet wide. Their channels were later choked by sand, now cemented to massive sandstones, brown to pale-buff in colour which were the source of the local building stones and of an extinct export trade. Rare fresh-water mussels occur in the Deltaic Series but the only evidence of the reptiles which inhabited the swamps are foot-print impressions left on the drying mudflats. Apart from small building stone quarries the only material of economic value in the Middle Jurassic rocks is the Moor Grit, a thin and irregular sandstone of value as a refractory because of its high silica content.

Three times during the accumulation of the Deltaic Series, seas flooded over the delta surface depositing shales, sandstones, sandy limestones and ironstones, usually with scattered marine fossils but with only rare ammonites. Of these the Eller Beck Bed was worked in mediaeval times for iron, and heaps of slag along its outcrop mark the sites of old bloomeries (see page 59). To the south-west its equivalent, the Hydraulic Limestone, suggests more open marine conditions in that direction. The Millepore Bed occurs only within the southern part of the Park, the invading seas failing to penetrate north of a line through Robin Hood's Bay and Sutton Bank. By contrast the succeeding Scarborough Beds covered the entire area with up to 100 feet of sandstones, shales and impure limestones. These now form a distinctive feature throughout the moorland interior, as well as an important source rock for springwaters. They are most easily seen at Hundale Point, Cloughton Wyke, 3 miles north of Scarborough, but they cap the tops of the main ridge and watershed from Shunner Howe on Rosedale Moor to Botton Head (1,419 feet OD) two miles to the north-west.

These Middle Jurassic strata as a whole form the cliffs from Scalby to Ravenscar, and from Ravenscar they cap the Liassic cliffs as far as Boulby. Inland they form the greater part of the Park area to the great western escarpment as far south as Black Hambleton. They are cut through in the inland dales such as Glaisdale and Farndale: to the south they are overlaid by younger strata of the Hambleton and Tabular

Hills. Their poor acid soil supports only heather and bracken, sedge and cotton grass, together with their resulting peats. More than any other single feature these rocks are responsible for the distinctive character of the moorland region of the Park.

The Upper Jurassic Rocks

Throughout Upper Jurassic times shallow marine conditions returned to the region, but unlike those of the Lias, thick sandstones and limestones were laid down in shallow seas, with only subsidiary shales. The sea that finally flooded across the Middle Jurassic delta first deposited the thin Cornbrash, a sandy limestone which was successively covered by a soft, red-brown sandstone, the Kellaways Rock, and then by the Oxford Clay. All these beds yield ammonites, belemnites and many bivalves, but usually they are less well preserved than those of the Lias.

These rocks are rarely seen, being confined to a moorland strip west of Whitby and to the lower and middle slopes of the north-facing escarpment of the Tabular Hills. This strong feature runs from Scarborough Castle by Saltergate and Hutton-le-Hole to Black Hambleton, where it reaches its highest point (1,307 feet OD). It is capped by the Corallian Series, a group of oolitic and shelly limestones with some coral reefs and an abundant fauna of bivalves, gastropods and ammonites. This indicates that clear, shallow and probably sub-tropical waters then covered the area. Important fine-grained sandstones are also included in the Corallian Series, but it is the limestones that control the essential character of the Tabular and Hambleton Hills, not only in the development of the rich brown soil but also in providing the grey-white wallstone and building stone of the many scattered villages. Quarrying of the limestones is today one of the few remaining industries which draw directly upon the natural reserves of the Park area.

The Corallian Series is confined to the southern belt of the Park where it dips gently south to the Vale of Pickering. The overlying Kimmeridge Clay at one time overlaid the older Jurassic beds throughout the entire Park, as did also the Cretaceous Chalk of the Yorkshire Wolds. These beds were, however, long ago stripped away and the Corallian is now the youngest group of 'solid' sedimentary rocks occurring in the Park.

The Tertiary Period

After the deposition of the varied Jurassic sediments and the now eroded Cretaceous strata, little is known of the geological history of the Park for a considerable period of time. Far to the south and in particular in the Mediterranean area, however, thick accumulations of sediment

PLATE II. Gormire from Sutton Bank

PLATES III and IV. Villages of the Park: (above) Goathland; and (below) Staithes

were laid down, of which no representatives are known in Yorkshire. This Mediterranean deposition was followed by profound movements of the crust when these beds were complexly buckled, fractured and uplifted, and the Alps with its associated mountain ranges were formed. Only the ripples of this Alpine storm reached the region that was to become the Park, but they were sufficient to fold the great pile of Jurassic rocks, as well as those foundation rocks which underlie them, into a series of broad domes and basins. The tilting rarely exceeds 3° from the horizontal, but it is sufficient to raise beds which are at sea level at Cloughton Wyke (at the southern limit of the Park's coastline) to a height of 1,400 feet on the main moorland watershed.

The largest of the uplifts, the Cleveland dome, occupies the western part of the moorland region, in particular that of the radial valley system. Another dome, but elongated north-south, crosses lower Eskdale and runs from Goldsborough near Kettleness almost to Allerston in the Vale of Pickering. This dome yields the natural gas used domestically in Whitby. Parts of the Robin Hood's Bay dome may be seen at low tide, when the curving pattern of the dipping Lower Lias sandstones and shales indicate that the dome is centred about a mile to seaward. Similar dissected domes occur at Kettleness and Boulby.

Complementary downfolds separate the domes. Thus the Goathland syncline lies between the Cleveland and Eskdale domes. A structural basin occupies the area around Whitby and a more elongate east-west basin crosses Lealholm Moor north of Eskdale. Other structural domes and basins may be detected in the Park. They have only little influence however on the form of the surface, and are essentially the arrangement of the rocks beneath the surface. They may be likened to a gently rucked up tablecloth beneath another cloth, the present surface, thrown carelessly across it.

Only a few fractures accompanied the folding of the rocks, and of these the Peak fault is outstanding. Exposed by the track from Ravenscar to the shore it presents a major dislocation, with much movement in a horizontal direction, in the Jurassic rocks. On the shore it divides into two, and the shattered rocks flank Old Peak. Other less striking faults occur at Whitby and Runswick Bay. All are aligned in an approximate north-south direction, and all probably indicate fracture accompanied by horizontal displacement caused by a major torsional stress occurring in depth.

About the time of this structural development the region was intruded by its only igneous rock. This occurs as a dyke about 30 feet wide which cuts the Park in an almost straight line from Great Ayton on the north-west edge of the Park, to a point four miles west of Ravenscar

where it dies out. It is part of a 300-mile-long dyke which originates in Mull. The rock is a tholeite, dark-grey in colour and crystalline in texture and which was intruded in molten form, but with only little baking of the adjacent rocks. It provides a high quality roadstone, and has been extensively worked both in quarries and mines. Its position is now frequently marked by a long narrow excavation, as on Sleights Moor.

Much of the folding of the Jurassic strata of the past occurred in mid-Tertiary times. In late-Tertiary times the region was subjected to intense erosion, probably by long continued marine action which planed the entire area to an almost flat surface. This peneplane extends from the moorland area, where it is particularly readily seen, across the tops of the Tabular Hills to the Chalk Wolds. It resulted in the formation of one of the most distinctive features of the Park area, namely the uniformity of summit and ridge levels.

This surface was itself gently folded, with further uplift of the Cleveland dome in particular. Streams then developed on the gently inclined slopes to flow radially from an area which extends from Burton Howe on the west, near Ingleby Greenhow, by Stony Ridge to Loose Howe on Rosedale Moor. They ultimately cut deeply through the Middle Jurassic rocks of the moors to form the broad radial valleys which expose the Lias. Those flowing to the north (e.g. Grain Beck, Baysdale), north-east (Glaisdale Beck), and east (Wheeldale Gill), as well as intermediate streams, ultimately form the river Esk and join the North Sea at Whitby. Those flowing south (e.g. the river Seph in Bilsdale), and south-east (the river Seven in Rosedale) follow a much longer course to the Humber estuary.

The through valley of the river Esk from Kildale to Whitby completely dissects the Park. Its origin lies in the greater erosive action of the short river Leven contrasted with the headwaters of the eastward-flowing river Esk. The upper waters of the Eskdale system, in particular Lounsdale Beck and the river Leven were therefore captured and diverted westwards. The general eastward direction of flow of the Esk may well be inherited from a much older ancestor such as an early river Swale which flowed eastwards from the Pennines on a surface long eroded away.

During this long-continued shaping of the Park, the weaker belt of Oxford Clay was readily eroded, leaving the north-facing Corallian escarpment of the Tabular Hills standing 200 feet above the rocks of the moors. Further south the softer Kimmeridge Clay was also worn down to form the low-lying belt which is now the Vale of Pickering, but in Tertiary times was an inlet of the sea.

Such isolated conical hills as Freebrough near Staithes and Blakey Topping 1½ miles east of the Hole of Horcum are preserved by residual caps of resistant sandstone on weak clays, though local legend has a more vivid interpretation. The superb natural amphitheatre of the Hole of Horcum on Saltergate at the head of Levisham Beck, eight miles north of Pickering, which is also associated with these hills in folk-lore, is the product of intensive spring action and excavation of the Corallian rocks above the softer Oxford Clay.

Cambering influences the development of some but not all of the caves in the limestones of the Corallian Series. In contrast to the Pennine cave systems those in the Corallian are all small. Some are formed by the solution of limestone brought about by ample waters percolating through the rock. Others are natural fissures (gulls) on the escarpment edge.

The Pleistocene Period

The final chapter in the geological development of the Park was initiated by the onset of glacial conditions, which characterise the Pleistocene Period. During this time, probably of about 600,000 years in duration, glacial conditions developed and waned four times over Britain. Of the three earliest glaciations little evidence remains in the Park except scattered erratic pebbles, usually deeply rotted, which occur on the high moors, in localities far from possible contamination. By contrast the last glaciation stamped its character firmly around the margins of the Park.

About 70,000 years ago slow refrigeration caused ice to form in the mountainous region of Scotland and Northern England. North-east Yorkshire was insufficiently high to develop its own glaciers, but ice streams advanced towards it from three dominant directions. From the Lake District ice crossed the Pennines to the Vale of York where it divided, part to turn south, and part to continue east to Teesmouth. Here it was joined by the Scottish ice which flowed south across Northumberland and Durham. These two streams were diverted southwards down the east coast of the Park by the more powerful Scandinavian ice sheet which occupied the North Sea.

Despite their combined pressures the ice-streams were insufficiently powerful or bulky to override north-east Yorkshire as a whole, which remained outstanding, though snow-covered throughout the last ice age. Along the coast however, ice forced its way inland for a distance of about eight miles, most particularly up Lower Eskdale to Lealholm and up the Murk Esk to Goathland. The limits of its advance are sometimes marked by terminal moraines as at Lealholm, or by gravel ridges as near Ugthorpe four miles north of Eskdale.

One effect of this surrounding ice on the area was most marked during the early stages of its melting. Large volumes of meltwater were then released from the ice and also from the snow of the moorland hills, and poured on to the lower ground. Failing to escape by the ice-blocked valleys it turned along the lowest available route, which was usually between the slopes of the hills and the ice-front itself. As a result these vigorous streams of meltwater cut spillways or overflow channels along the margins of the ice as they drained to lower ground, or alternatively they passed across a low col in the hills away from the ice-front itself.

Thus during early melting, waters drained eastwards along the ice-edge across Danby Low Moor and turned south by Ewe Crag Slack into Eskdale. This through valley, the product of an earlier age, was now choked at Lealholm by the coastal ice which had driven inland, and at Kildale by the Vale of York ice which had forced its way for a short distance into the valley. As a result an ice-dammed lake accumulated in Upper Eskdale and its tributaries to a height of 715 feet OD. On the lake bed were laid down sands, laminated clays and, in the shallows, peaty clays, building up the characteristic flat floor of a glacial lake, now good arable land.

The waters of Lake Eskdale drained south-east round the ice margin by Glaisdale and Egton Bridge, Randay Mere to Goathland. Along this route marginal overflow channels were cut across the spurs and small lakes formed in the intervening valleys. Moreover as the ice slowly retreated down-slope, those earlier channels cut high across the spurs were abandoned, and new channels were eroded along the later-established ice-margin during temporary halts in retreat. These are best seen between Key Green and Goathland, where a series of parallel overflow channels mark pauses in the retreat of the ice-front. South-east of Goathland ice-dammed waters accumulated until they surmounted a col in head of Newton Dale, where they turned to pour southwards, away from the ice-front to scour and deepen Newton Dale.

Along the coast, and particularly south of Robin Hood's Bay, a similar series of overflow channels developed between the North Sea ice and the hill-slopes which surround it. Some are now crossed by the Whitby-Scarborough road; another provided a natural cutting for the railway through high land between Stainton Dale and Cloughton stations. Probably the most accessible however is Forge Valley, which from East Ayton northwards is followed by a road for two miles. Similarly near the foot of the western escarpment overflow channels, some strikingly sharp, were cut by meltwaters. Several provide convenient grades for roads along the margins of the Park (e.g. Oldstead-Kilburn and Kirby Knowle to Cowesby). At the maximum stage of

development these waters spilled down Bilsdale from its head near Hasty Bank and down Raisdale.

These south-draining waters, in particular those flowing by Newton Dale and Forge Valley, but also by many streams which cross the Corallian dip-slope, carried the whole of the meltwaters from the snow-covered Park area and from the ice which impinged upon it. What had been a narrow sea-gulf extending inland as far as Helmsley was, at this stage dammed by North Sea ice near Wykeham and by Vale of York ice near Ampleforth. This ice-dammed lake received the meltwaters, as well as the sediment they carried, which as in Upper Eskdale was deposited to build up the flat-floored Vale of Pickering. Even after the melting of the ice dams this low-lying area persisted as marshes until historic times.

With the continued retreat of the surrounding ice, the debris that it carried was deposited as boulder clay or as sands and gravels. These glacial deposits, usually reddish-brown in colour, were deposited particularly on the glaciated ground of the coastal belt, where they were laid indiscriminately over both hills and valleys as well as in the pre-glacial bays. Many of the earlier topographic details were in consequence completely covered, so that the present surface form may give little indication of the earlier land-form. Further, the drainage of the many parts of the region, freed from the constraining ice, flowed down-slope from the unglaciated interior across the irregular hummocky surface of the newly deposited boulder clay. New courses were established which in some cases coincided with the original valley, but at others were several hundred yards from it. In the former examples the original valley is now partially re-excavated: in the latter the streams cut through the glacial deposits into the underlying rocks to form steep-walled rock gorges. These so-called post-glacial river channels are common in the glaciated area, and are responsible for much of its scenic character. They are usually narrow, rock-walled ravines, subject to rock-falls, their floor undergoing rapid down-cutting by a turbulent stream or by waterfalls. Wheeldale Beck and Eller Beck in the Goathland area show many of these features. In common with many similar valleys in the Park they are colonised by self-sown and largely inaccessible timber. The effect of post-glacial diversion of the river is particularly distinctive in Lower Eskdale, where from the Lealholm moraine to the sea, the Esk has cut ten such gorges of varying depth, with the result that the valley floor is in the main useless for road construction.

The late-glacial high sea-level was responsible for the erosion and planation of boulder clay, particularly to 190 feet OD. This cut the distinctive flat surfaces in the boulder clay at Robin Hood's Bay, Whitby, Sandsend and Staithes and elsewhere. This plane, gently-tilted surface controlled the development of parallel streams, for example Sandsend

and East Row Becks which flow for 2 miles, never separated by more than 480 yards. Easington and Roxby Becks near Staithes, are similarly striking, as are Rigg Mill and Intake Becks near Whitby. These twin valleys are up to 175 feet deep, and the long narrow ridges or riggs between are a distinctive feature of the coastal region.

COASTAL DEVELOPMENT

Geological processes continue today to change the form of the Park, as may be seen in occasional rock-falls at Roseberry Topping, Whitestone Cliff and elsewhere. Nowhere may these changes be more strikingly seen than along some parts of the coast where great variations in marine erosion occur.

Undoubtedly in pre-glacial times the coast of north-east Yorkshire was more irregular than at present. The northern bays of the Park, from Runswick to Robin Hood's Bay were at that time more deeply incised into the land and the separating headlands projected further seaward. At the present time the residual plugs of glacial clays and gravels still fill the heads of these bays and form cliffs up to 250 feet high. They are however in process of geologically rapid removal by one or more natural processes: wave action at their foot is particularly effective during spring tides and north-easterly gales: stream erosion and spring action from the glacial sands are more constant in their effect: land-slipping and mud-flowage are episodic in their occurrence, though characterised by occasional dramatic results. All these processes spell ultimate disaster to man-made structures founded on the coastal glacial deposits unless elaborate and usually expensive remedial measures are undertaken.

The basic and pre-glacial form of the coast is clearly divided into two parts: that part to the north-west of Old Peak (Ravenscar), about 20 miles in length exclusive of irregularities; and that south-south-east of Old Peak, about six miles in length to the limit of the Park at Cloughton Wyke. Because of the controlling geological factors each is distinctive in its form. The northern Liassic belt is characterised by bays with sandy beaches separated by near-vertical cliffs: the southern Middle Jurassic stretch is steeply cliffed throughout with rare, poorly developed bays and a boulder beach along its entire length. In consequence the former is much better known by the general public.

The development of bays in the northern belt is controlled by two factors: firstly by the variation of erosion shown by those beds exposed near sea-level on the coast; and secondly by the structure, in particular the folding and faulting, which controls the distribution of both resistant and unresistant rocks along the coastline.

The successive beds which make up the Lias respond differently to

the stresses of marine erosion. This may be seen on a small scale within Robin Hood's Bay itself, where the fine sandstones of the Lower Lias resist marine erosion more effectively than the interbedded shales, with the result that the former stand several feet above the average level of the shore. Within the Lias in general the sandstones and ironstones are more resistant to erosion than the interbedded shales. These rocks vary in level according to the gentle folding that they have undergone. Thick sandstones such as those of the Sandy Series of the Middle Lias form not only promentaries as at Cowbar Nab, Staithes, but also control the general seaward bulge of this part of the coast and even more strikingly at North Cheek, Robin Hood's Bay. At Old Peak also, a down-faulted block of these resistant beds forms the south-easterly boundary of the same bay.

The occurrence of the Ironstone Series of the Middle Lias at sea-level controls the development of Old Nab near Staithes and more dramatically of Kettle Ness itself, at the southern limit of Runswick Bay. But in addition to these thick and tough rock units, some of the thin resistant beds control the finer pattern of bay development, with a geomorphological importance out of all proportion to their thickness. Outstanding among these is the Top Jet Dogger, a tough, impure limestone up to six inches thick. Where this occurs near low tide mark it makes only a small feature. Where at high tide mark or above, it is undercut with the formation of cliffs, and is again of little effect. But in those localities where it occurs about two feet below mean sea-level, it effectively resists erosion with the consequent preservation of a nab or small promentary above it. The occurrence of the Top Jet Dogger at this critical position controls the location of the prominent Sandsend Ness and Lingrow Knock, each bounding well-developed bays, as well as Saltwick and Black Nabs which flank Saltwick Bay. Much of the finer detail of bay and headland development is indeed similarly controlled by this and other thin hard beds.

To the south of Peak only Cloughton Wyke is comparable with the bays to the north-west, being an inlet cut in soft Middle Jurassic shales and silts between thick resistant sandstones and limestones. Elsewhere along this southern coastal belt, the more uniform resistance of the Middle Jurassic rocks precludes bay development. The lack of streams cutting this part of the cliff, except at Hayburn Wyke, and the protective barrier of large boulders of Middle Jurassic sandstone along its entire length also tends towards uniformity. For the most part these cliffs are strikingly stepped, each tread being covered by the debris of old rock-falls, now heavily mantled by vegetation. They present a warmth and maturity very different from the stark Liassic faces to the north-west.

3

Natural History

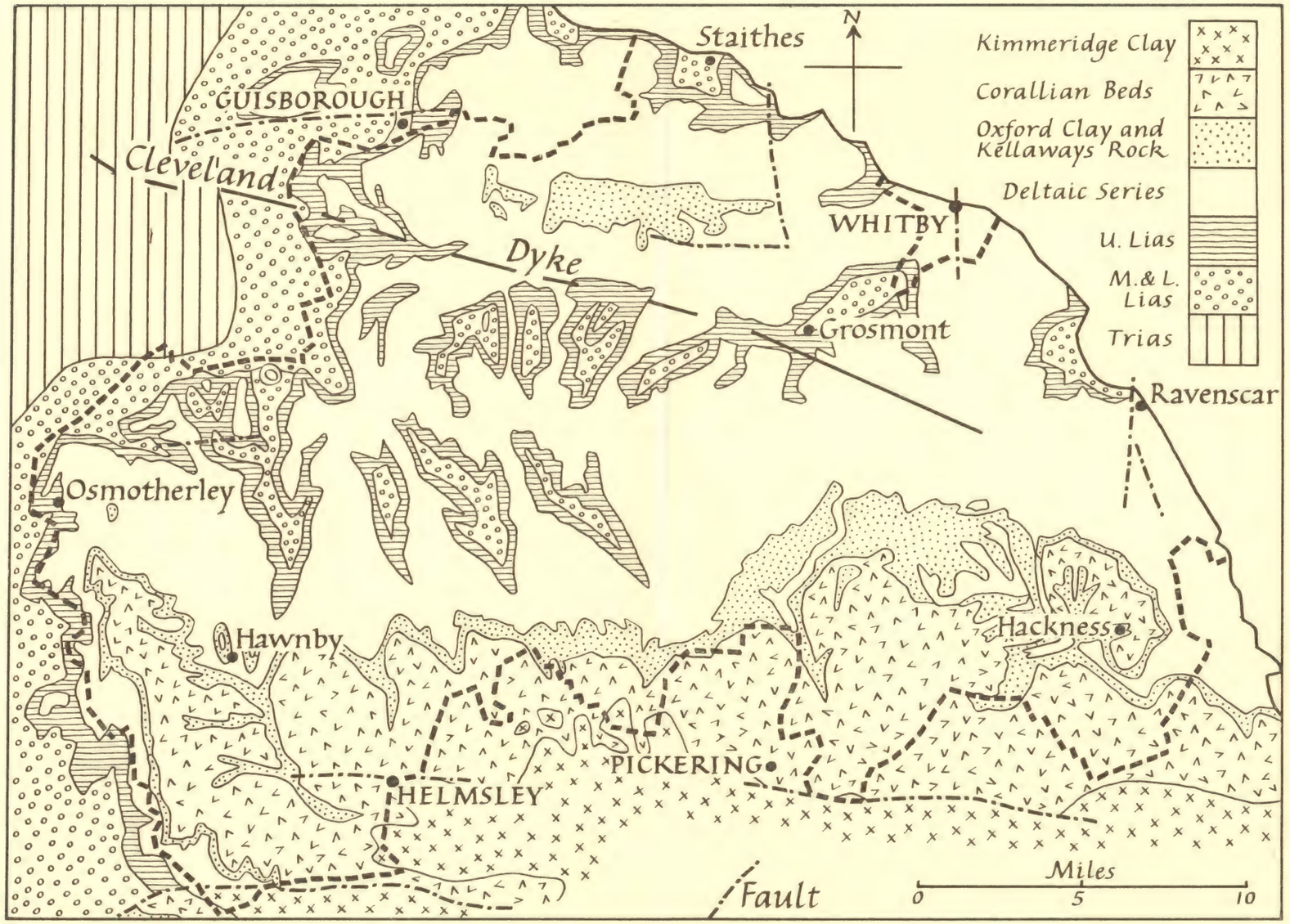
by CATHARINE ROB

SINCE the great naturalist John Ray visited North Yorkshire three hundred years ago when he recorded seeing the lesser twayblade 'Growing on a moor near Freeborough Hill', naturalists have come from all parts of Great Britain in search of the many interesting plants which grow within what is now the Park area. Most naturalists visit the Yorkshire Moors in spring or summer, but even in winter when the higher ground is bleak and windswept or sometimes covered with snow, birds and animals are to be seen in the valleys sheltered from the cold wind. The south and west facing slopes of the moorlands are generally some weeks earlier than those facing north and east, and it is not uncommon to find the hazel catkins at Christmas or primroses in flower in mid February.

The area falls into three natural regions, moorlands, dales and coast, which merge into one another with many plants and animals common to all three, but with differences which are very distinctive. All three have a certain amount of cultivated ground; the top of the sea cliff is often an arable field. A lot of the high ground between the Rye valley and the western escarpment has been ploughed and cornfields replace heather moor and rough grassland. Less arable land is found in the dales but much of the old grassland has been ploughed out and re-seeded. Where this occurs the native wild flowers are lost and even after several years the new grass fields have a poor flora compared with some of the few remaining old pastures.

THE MOORLANDS

The moorlands reach a height of 1,419 feet OD at Burton Howe at the head of Baysdale, and 1,427 feet OD at Cringle above Kirkby in Cleveland. Much of this region is heather moor, often very dry with occasional sandstone outcrops but in some parts having large areas of very wet boggy ground. The dominant plant is *Calluna vulgaris* known in this part as ling; bilberry is common in many places, particularly on the dry sandstone edges, cowberry (*Vaccinium vitis-idaea*) less common in most parts but often abundant at the head of some of the smaller dales, while



Map 3. The Geology of the Park

crowberry (*Empetrum nigrum*), cross-leaved heath and bell heather, heath rush (*Juncus squarrosus*), cotton grass and bracken, are common plants of the moors; bracken covering many acres of the tops and hillsides in the upper and middle parts of the valleys. For much of the year the moorland region is dark and almost colourless, the ling looking brown and lifeless; in spring the fresh green of the young bracken gives a brightness to the hillsides but the real glory of the moorland comes in late summer when the ling is in flower, when as far as one can see on every side the ground is a blaze of purple, broken only by patches of sphagnum bog, bracken and small green fields.

Most of the moorland is acid with, in places, quite deep beds of peat. In some areas the peat is thick enough to cut for fuel but in many parts it is only a thin layer over the rocks. The flora of the peaty areas is more varied than that of the moorland proper as there is usually some shelter from the wind.

Most of the moorland region has the restricted flora of the heather moor, but in a few places rare plants occur, for the most part in the Saltergate and Goathland areas. On Fylingdales Moor where the Ballistic Missile Warning Station is now placed, about four square miles of moor has been taken over and closed to the public. In this forbidden territory two rare plants have been recorded. Near May Moss, bog rosemary (*Andromeda polifolia*) has been found, and near by the few-flower sedge (*Carex pauciflora*) reaches its southern limit. A short distance from here at the Hole of Horcum, dwarf cornel (*Chamaepericlymenum suecicum*) is abundant on one part of the north-facing slope. This is another of the plants which reach their southern limit in our area; the first record was as long ago as 1795, and while a number of new stations for this very rare plant have been discovered in recent years, all are within a short distance of the original one.

Chickweed wintergreen (*Trientalis europaea*) which grows with the cornel in the Hole and at Crosscliffe, is found in many places throughout the moorland and in a few places in the dale heads from Forge Valley to Gurtof Gill above Boltby. Lesser twayblade is fairly abundant in many of the wet sphagnum bogs, the green flowers and small size make it difficult to see and there is no doubt it is often overlooked.

The present almost treeless condition is largely due to the effects of grazing by sheep and rabbits; the remains of trees in the deeper peat, mostly birch but with some pine, show that at one time the hill-tops were forest covered. Changes in the climate (see page 36), grazing animals and the hand of man have cleared away the natural tree cover. Where there is some protection from sheep, rabbits and strong winds, such as on the steep slopes of the daleheads and on some of the landslip tumble, rowan, birch and sessile oak manage to gain a hold and birch at

least is able to colonise wherever conditions allow. More surprising are the number of holly bushes in these upper valley heads, frequently growing on a precipitous shale bank out of reach of any grazing animal.

Juniper, always uncommon in Yorkshire, is in several places in upper Baysdale and is flourishing here although in most Yorkshire sites no regeneration has been observed. Ling which is dominant over most of the tops descends the slopes for a little distance where bracken or scrub woodland then take over. Bracken has spread in many places in the last 60 years and has colonised many of the old grassland 'intakes'; today only a stone wall, often ruined, marks the place which was once rough pasture of the intake. On the damper slopes bracken grows to a height of 5 or 6 feet and is so dense that the only plants that can grow and compete with the shade are those which flower early, before the fern has reached full growth.

Fire is the great danger in these moorlands, particularly in the early spring and during periods of drought in the summer. If the peat gets really alight it may burn for many weeks until the coming of snow or rain in winter. Once this happens the burnt ground becomes a desert that no plant life can colonise for many years. An area of ground above Bilsdale which was burnt about 1935, is still bare of vegetation. The burnt peat is eroded by wind and rain leaving only large areas of bare rock. When the fire is less severe and the peat cover is undamaged, the ling may return if conditions are favourable, though more often bracken colonises the burnt ground and when this happens there is no hope of the ground again becoming heather moor. Few plants can compete with bracken. Bluebells are an exception and like the chickweed wintergreen they complete their life cycle before the bracken gets into full growth.

The fauna of the moorlands is less rich than that of the sheltered valleys though both regions have many species in common. Adders are plentiful, both in the moors and dales. Common lizards favour the dryer well drained parts and may be seen at times sunning themselves on the dry stone walls. Slow worms are perhaps more common in the wooded valleys, but they are by no means rare in much of the higher ground. Foxes and badgers too like the shelter of the warmer valleys but are met with at times throughout both regions. Many moorland birds are found in this region, red grouse, curlews and golden plover (Plates IX & X) in all parts, while lapwing may be seen and heard at all times of the year, but are by no means restricted to the upper ground. Merlins nest in a few places but are rare and kestrels, while not rare, have decreased in numbers in recent years. Flocks of snow bunting have been recorded in some winters and ring ousel, while not rare, are very local in their occurrence. Black headed gulls nest in a few places in the Whitby area but so far, no large gullery has become established.

Other birds found on or near the moorland include skylark, meadow pipit, wheatear, carrion crow, and more rarely pheasant. The red grouse have suffered in the disastrous fires which have devastated the moors recently above Bilsdale. The restricted flora of the greater part of the moorland region supports a small insect population; interesting moths including the northern eggar may be found in many places, while the typical butterflies of moorland, green hairstreak and common heath are plentiful. When the ling is in flower bee-keepers from all parts of the low country send their hives up to the moors for the heather honey harvest. Long rows of hives along the walls at the edge of the moors are a common sight.

THE DALES

The second natural region consists of the valleys of the Esk, Derwent and Rye, the upper parts of the Leven and Cod Beck and the short streams which run direct into the sea. The dales of the Esk have no limestone belt and have a less rich flora and fauna than the more extensive Derwent-Rye system which rises to the north of the moorland and cuts through the belt of limestone on the southern fringe of the Park. The Cod Beck and its tributary streams rise at the western side and only a short portion of their valleys is within the Park. Once the bracken-clad slopes of the dale head are left, the valley widens and the lower slopes are grassland with a few woods, alders and willows border the streams and hedges replace the stone walls; little mature woodland remains in the upper part of the valleys, hedgerow timber is still fairly abundant but most of the trees are small and have little value as timber. Towards the southern end of the south-flowing streams the limestone appears and the dales are narrowed with steep sides generally wooded. Much of this wood has been felled recently but there is extensive replanting.

Some of the most attractive wild flowers grow in these limestone valley sections where woods, felled during the war, have not yet been replanted and where a semi-natural scrub has grown up with ash, wych elm, birch and sessile oak forming most of the tree layer, hazel, elder, holly, spindle and bird cherry are common shrubs. Alpine currant (*Ribes alpinum*) is common in many of the Rye and Derwent valley woods, in the more open parts and generally near the edges; it occurs also in a number of places elsewhere in the dales region as a plant of the hedgerows, as do many other woodland relicts. Maple is a common hedgerow plant but where allowed to grow untrimmed it makes quite a sizeable tree and forms part of the regeneration woodlands in several places. In some of the unfelled valleys a mixture of trees is found with Douglas fir, pine, walnut, sycamore, wild cherry or gean, and many others.

The herb layer of the wooded valleys is extremely rich in rare and beautiful species. Lily of the valley, baneberry or herb Christopher (*Actaea spicata*), herb Paris, the bird's-nest orchid and columbine, grow mixed up with the more common wood sorrel, wood forget-me-not, dog's mercury, garlic and a host of other plants both rare and common. Toothwort is found growing on hazel roots, but is known to have occurred on both sycamore and wych elm. Common wintergreen (*Pyrola minor*) grows in a few places, Moschatel (*Adoxa moschatellina*) and yellow star of Bethlehem, both plants of open woodland, are generally distributed throughout the limestone belt, the latter being common and often found under hedgerows quite away from the woods. Both oak and beech ferns (*Thelypteris dryopteris* and *T. phegopteris*) grow in the calcareous woods; male fern (*Dryopteris filix-mas*) and the golden scaled species (*D. borreri*) are common in the dales, of both the Esk and the Derwent and Rye, while the rare *Dryopteris aemula* has been found in one of the more eastern valleys of the latter.

The wet meadows of the limestone belt are another habitat for rare plants though much of this habitat has been lost by draining and ploughing. In the few good places which remain the globe flower, birds eye primrose, marsh helleborine, butterwort, marsh valerian, black bog rush, and the marsh orchids (*Dactylorchis purpurella* and *D. incannata*) are to be found. There are many interesting sedges, and in the drier parts the moonwort and field gentian occur. By the streams the rare willow, *Salix andersoniana*, is general, along with other rare plants which need much more careful search.

The dry grassland has its share of good plants, rock rose, salad burnet, bloody cranesbill, Carline thistle, basil thyme and woolly headed thistle, grow side by side with the mountain everlasting on one small area of grassy upland. Deadly nightshade is native in at least one of the side valleys of the Rye and is in many of the disused quarries. The bee orchid (*Ophrys apifera*) is also found in quarries and on open grassland, while the fly orchid (*Ophrys insectifera*) is also found in quarries and in open woods.

The plants of the dales region away from the limestone belt, are less numerous but still full of interest. Farndale is known as the 'dale of daffodils' (Plate XI) but in the past has suffered at the hands and feet of many vandals. Once the motor car had made the dale easy of access, large crowds came each year which, not content to stand and stare, picked the flowers and trampled many to pulp. Some even mowed the flowers to take away for sale in the industrial areas. Now that the dale has been designated a local Nature Reserve the daffodils are allowed to grow unharmed and give pleasure to hundreds of visitors each year.

Bluebells and wood anemone are woodland plants which often remain on the hillsides and in grass fields long after all other signs of the woods have gone. Sweet cicely, plentiful by roadsides along many of the dales, may be a relict of the time when it was used as a spice for hay, and the fruit made into cough sweets for children. Lady's mantle is a common plant throughout the whole of the dales; the commonest of the seggregate species is *Alchemilla glabra* with *A. xanthochlora* and *A. vestita* plentiful. *Carex pendula*, the drooping sedge and the largest British species, is locally abundant, frequent in Forge Valley and in Riccal Dale, and one of the most characteristic plants of the small valleys along the coast. The giant horsetail grows in the same sort of places but is also abundant along the spring line on the western slopes.

Violets of several kinds grow in woodland and hedgerow. Sweet violet with white, purple or lavender coloured flowers is the first to flower followed by the common dog violet with hairy violet on the limestone and marsh violet in the wetter and more acid places. Where woodland has been felled the patches of dog and hairy violet are very fine for a year or two until smothered by the growth of stronger plants. Rose bay is quick to colonise newly felled ground especially on the western facing slopes where it gives the hillsides a vivid colour, visible for many miles. Other plants of interest are white corydalis, green hellebore, stemless thistle (*Cirsium acaulon*), which although ploughed up at the classic locality on Harriet Air near Rievaulx, reaches its northern British limit in the two remaining stations; stinking hellebore also reaches its most northerly station in the Park, while the May lily (*Maianthemum bifolium*) in the only place in Britain where the plant can be considered native, is in one of the wooded dales at the eastern side of the limestone district.

The insects will have to be left very much for those interested to consult the records of the specialists who have visited the various localities in the past. Rare beetles have been found in some of the wet meadows of the limestone belt, and many butterflies including some of the fritillaries and common blue are generally seen in the quarries in the Pickering district; some of the wooded valleys have many nests of wood ants. The Rye, Derwent and Esk are well known to anglers. Grayling are plentiful in the Rye and Derwent although numbers have become less in recent years. Trout are in all the streams and some quite good fish have been reported, especially from the lower reaches beyond the Park boundary. In the small becks and upper reaches of the rivers the fish seldom reach more than about seven inches and most of the ones caught by anglers are below the takeable limits. Salmon run up the Esk and are netted at the mouth, but once again, numbers are less than in the past. Brook lamprey, bullhead and minnow occur in the upper Der-

went, also crayfish, while eels are common everywhere in river, pond or lake.

The dales region has a variety of habitat for bird life and the list of nesting and visiting species is very long. Common species include wood pigeon, lapwing, tawny owl, carrion crow, rook, jackdaw, magpie, song and mistle thrush, blackbird, starling, greenfinch and many others. Less common are the heron which still nests in one place, dipper, kingfisher, pied flycatcher, goldcrest, tree creeper, great spotted woodpecker (all three species occur), jay, mallard, wood warbler, grey wagtail, tree pipit, night jar, turtle dove and the marsh, coal and long tailed tit. Great and blue tits are common. Hooded crow is a frequent winter visitor not confined to the dale region but more common there than in the rest of the area. Large flocks of fieldfare and redwing come in winter especially where there are plenty of hawthorn bushes.

Waxwings are reported most winters and cross bills though exceedingly rare have been seen on a few occasions in recent years. Woodcock nest in a few places both in the dales and on the western slopes and there are several reports of nightingales but always from the extreme south of the area. Corncrake, once a common bird throughout the North Riding, is seldom heard these days, the reason for this being obscure. Earlier mowing of the meadows may be one reason, the ploughing and re-seeding of so much grassland must have some effect, and the modern grass mower has also been blamed for the disappearance of corncrake from much of the country.

Red, fallow and roe deer are naturalised in the forest areas both to the west at Hambleton, where only a few red deer are known, and to the east in the northern part of Allerston Forest where all three species are recorded. These animals are rarely seen but their tracks are numerous in snow or in the mud of many damp forest rides.

Badgers and fox are plentiful and hedgehogs are numerous though unfortunately many are killed on the roads particularly in spring and autumn. Rabbits which were almost extinct after the outbreak of Myxomatosis are once more becoming too abundant, especially in the woods. Hares, stoats, weasels and moles occur in all districts and water voles are seen along all the rivers and becks. Red squirrel although rare still persists in a few places, while the grey, though common, is not so much in evidence as in some other parts of the North Riding. Helmsley and the surrounding district is noted for the number of species of bat, some of which no doubt occur in other parts of the southern valleys.

THE COAST

The third natural region, the coast, is the narrow strip of land above the cliff edge, the actual cliffs and the rocks which in some places stretch

for some distance out to sea, uncovered at low tide and the habitat for many marine animals and plants. The cliffs are mostly rocky and in places high, Boulby the highest sea cliff in England, rising to over 600 feet. In places the cliff is made of boulder clay but no area of sand dunes or salt marsh occurs. The cliffs are unstable and plants have difficulty in getting roothold, both on the rock which is continually breaking away and falling, or on the easily eroded boulder clay. Few true maritime plants grow on the North Yorkshire coast, the majority of species are those of any unstable habitat. Coltsfoot, common horsetail, and certain grasses are some of the most abundant plants on the boulder clay, but where conditions allow, sea rocket (*Cakile maritama*) and sea beet (*Beta maritima*) with other strand plants are found but the scarcity of suitable habitats makes them uncommon plants. Wild cabbage and Alexanders grow on cliffs near villages and are relicts of cultivation. Grass of Parnassus is in wet places on the undercliff at the southern end of the coastal strip, and wood vetch which grows in some of the gills to the north, is abundant on the undercliff between Ravenscar and Scarborough. Sea spleenwort (*Asplenium marinum*) is in one locality in this southern part of the region and there is an old record of filmy fern not far away, but it is more than a hundred years since this tiny moss-like plant was last seen; black spleenwort (*Asplenium adiantum nigrum*) used also to grow on the undercliff. Sea buckthorn and tamarisk are rare alien shrubs of the coast, the latter always planted and near to habitations. Other characteristic plants are wild thyme, birdsfoot-trefoil, sea plantain, and *Poa rupestris*, the procumbent meadow grass, the latter being uncommon and often overlooked. The flora of the cliff top is often that of cultivated ground with few species of maritime character.

The birds make up for the restricted flora, sea birds nest on the rock edges, and the narrow wooded glens provide a habitat for many woodland species. The cliffs have a good list of residents; fulmar nest in a few places and may at times be seen inland, but this is a rare occurrence. Kittiwake, cormorant and herring gull nest on the same cliffs as jackdaw and house martin. Other sea birds occur as winter or summer visitors, common terns pass along the coastline in spring and autumn. The common gull remains a familiar frequenter of the Yorkshire coast, estuaries and harbours from late summer to spring. The narrow wooded glens have the typical avian fauna of the dales region—pied flycatcher, long tailed tit, tree creeper, tree pipit and redstart are seen in Mulgrave Woods. Hooded crow may be seen most winters.

The marine biologist will find this coastal region one of great interest; the long uneven scars extend along the shore below the cliffs and in places stretch for a considerable distance out to sea, often uncovered at low tide. At Robin Hood's Bay the reefs run out to sea in a series of

rocky ledges and afford suitable habitats for a number of seaweeds. The scars and pools along the whole length of the coast give an abundance of marine invertebrates, although as in the case of the birds and plants, the area is less rich than many other parts of the coasts of Britain. Scarborough (outside the Park) has become known as one of the many tunny fishing towns but many other fish have been caught along the coast from Saltburn in the north to Filey. Salmon and sea trout move along the coast during the summer months and a considerable migration of common eels takes place in autumn as they leave fresh water for the Atlantic breeding ground. Mackerel and cod are familiar names but some of the names for the sea fish sound strange to those who live inland; 'Jenny Hanover' (Starry ray) Black Jack (coalfish) and Natter-Parr (lesser weaver) are some of these names.

THE CULTIVATED LAND

In addition to the three natural regions discussed so far, the Park includes a large amount of cultivated ground which is found in both valley and upland. Most of the valley ground is cultivated grassland and here a large percentage of the acreage is new ley, the old pasture and meadow with its rich mixture of herbaceous plants being now replaced by one of the new grass mixtures. This has caused the loss of many plants, but most of them still grow in other localities and are not yet extinct to the area. The arable land is as a rule on the higher ground. There are very big ploughed fields on the ridge between the Rye Valley and the western escarpment, many of them having only recently come under the plough. The Combine Harvester has done much to make corn crops an economic proposition at this altitude.

Thousands of acres both of the upland and dale are planted and form part of the Forestry Commission's North Yorkshire Forest, the Allerston Forest to the east, and Hambleton Forest to the west, with a very large but still quite young forest in the Cleveland Hills where many of the wind-swept north-facing slopes have been planted in recent years. Even in the oldest part of the area, at the east near Forge Valley, this forest woodland is still too young to indicate with any degree of accuracy what its final fauna and flora are likely to be. At the present time the thick growth of young trees does not allow sufficient light for much undergrowth and the whole planted area has a very restricted flora and fauna, but once the trees have reached maturity and the final thinning taken place, it is certain that the forest area of the Park will be quite as interesting, if not more so, for the naturalist as the rest of it.

There are few large areas of open water in the Park, the only natural lake being Gormire at the foot of Sutton Bank. This has long been a

PLATE V. View from Gillamoor across Farndale to the moors of Blakey Ridge. The proportions of moor, wood and cultivated ground are very characteristic of the whole area

PLATE VI. Roulston Scar, Hood Hill, and the Vale of York. The edge of the Park—Jurassic limestone scarp of the western border

PLATE VII. Robin Hood's Bay. Reefs of Lias limestone along the foreshore—cliffs of boulder clay in foreground

favourite haunt of botanists, for here the rare tufted loostrife (*Lysimachia thrysiflora*) is plentiful and has increased in the last twenty years; pilwort (*Pilularia globulifera*) occurs sparingly over a small area, and several other quite interesting plants have been found. Much has been written about Gormire and records of its flora and fauna are available. All the other open water is found in reservoirs and artificial lakes. The Thirsk reservoir near Boltby is in the Boltby Forest and the conifers stretch almost to the water edge. Scaling Dam, the new reservoir beside the moor road from Whitby to Guisborough, is just as rich in species as Boltby is poor, although only completed a few years ago; already the list of species seen on and near is most impressive. Canada goose, sandpiper, curlew sandpiper, widgeon, dunlin, little stint, pintail, greenshank and red necked grebe are only a few. The nearby Lockwood Beck reservoir is much smaller but also has some good records.

It is difficult to do justice to an area as varied and as interesting as the North York Moors National Park, and this short account, being prepared by a botanist, has left much for the visiting naturalist to discover for himself; but after all, the best thing for a field naturalist to do is to go and see for himself just what there is to be found, and though hundreds of naturalists have visited the Yorkshire Moors since the day Ray saw the lesser twayblade, there are still plants and animals to be found and new records to be made. The conservation of the wild life of the district and its preservation for the future is the concern of all who love and appreciate the countryside.

4

Early Settlement

by ARTHUR RAISTRICK

THE North York Moors have much to offer to the person with archaeological interests, although there are only a few large or spectacular monuments. The unique features of the area are numerous groups of small cairns and burial mounds, sometimes to the number of hundreds in a group, which cover many of the hill ridges, and the large number of named burial mounds—'howes'—which form landmarks over the wide moorland plateau. Earthworks, settlements and other monuments though not abundant, include many that will reward a visit, and be worth a close study. A list of scheduled monuments in the National Park, helpfully prepared by the Ministry of Public Building and Works, is at Appendix I.

PREHISTORIC SETTLEMENTS

The oldest archaeological site lies on the southern edge of the Park area, near Kirkdale (SE 678856), where in 1821 a cave was discovered in the course of quarrying, in which were found the abundant bones and teeth of lion, several hundred hyena, rhinoceros, mammoth and many other pre-Glacial or later animals. The inner part of this cave is still to be seen, opening from the face of the quarry on the roadside where the old direct road from Helmsley to Pickering crosses Hodge Beck by the ford. The earliest human visitors were hunters of the Mesolithic Age and culture, known only by the so-called 'pygmy flints' which have been found at a few places on the moors. For a few thousand years after about 8000 B.C., they were the only people to use the area, coming as occasional nomadic wanderers.

The oldest structures to be seen in the Park are a small group of 'long barrows' of the Neolithic (New Stone Age) period. The best are at *Ayton East Field* (TA 000864), *Kepwick* (SE 492904), and *Scamridge* (SE 892861), all dating from the beginning of the second millenium B.C. They are oval hills of stones and gravel, a few feet high and 85 feet, 100 feet and 165 feet long respectively. Each hill covered the remains of several individuals and was probably used for burials through several generations. No chambers or other clear structures are to be seen in these barrows, and they represent only a fringe of the Neolithic cul-

ture reaching out from the Wolds, which did not penetrate beyond the southern edge of the moorlands.

The principal settlement of the moors occurred during the succeeding Bronze Age and it is mainly represented by a number of aggregations of small cairns and burial mounds, numerous larger tumuli and a few stone circles. The opening of the Bronze Age was marked about 1800 B.C. by the invasions of Beaker Folk from the Continent, so called from their typical pottery vessel, used only as a ceremonial pot buried with the dead. These 'beakers' are rare in north-east Yorkshire (three small groups of 3 or 4, near Boltby, Pickering and Whitby and one from Barnby Howes, NZ 830138, excavated in 1951) and there is little evidence that the higher moors were occupied. There was some mingling of the newcomers with the sparse Neolithic, and possibly Mesolithic descendants, and a new fashion in pots was seen in the development of the 'food vessel', a pot which was smaller and sometimes more elaborately ornamented than the beaker. The new population spread over a much greater area of the moors than that used by the Beaker Folk, and many examples of food vessels from burial mounds, are to be seen in the museums at Whitby and Scarborough. The early Bronze Age folk built the stone circles; the most elaborate types such as Stonehenge and Avebury are only represented in this part of the country by smaller and cruder examples, rings of rough stones, set on a gravel bank and not more than a few feet high. None the less these must have carried a similar significance for the local population and must have held an important place in their rituals and thinking.

The stone circles are poorly preserved, having been used as a convenient source for gateposts and larger walling stones. An approximate date for them may be 1600–1000 B.C. A few of the circles have been of free-standing stones set on a bank, but more are the remains of the containing bank or kerb of a burial mound. None of those remaining is spectacular but in most cases the situation with its wide views compensates for any deficiency in the monument. The principal circles are the following:

Blakey Topping (SE 873934), 7¼ miles north-east of Pickering; 50 feet in diameter, 3 stones about 6 feet high, still in position, and the place of others seen by depressions in the bank.

Bride Stones (SE 576978), on Bilsdale East Moor; 40 feet in diameter with about 40 small stones, probably the retaining bank of a barrow.

Danby Rigg (NZ 708065). A standing stone 5 feet high is sole survivor of a 42 feet diameter circle. At the centre two urn burials, c. 1000 B.C. were excavated.

Flat Howe (NZ 855046), on Sleights Moor; a round barrow with a clearly seen circular kerb of stones, making a stone circle.

High Bride Stones (NZ 855044), 5 miles south-west of Whitby; remains of two circles each 30 to 40 feet in diameter. Each has three stones still standing and others fallen. There are standing stones north and south of the circles, clearly associated with them.

Standing Stones Rigg (SE 983969), 6 miles north-west of Scarborough, 32 feet in diameter with 24 stones, up to 2 feet high. A structure at the centre was probably a burial chamber. Four cup-and-ring marked rocks from this central structure are in Scarborough museum.

Possibly of the same date as the circles, but more likely a little later, are the large aggregates of small cairns found on many of the moorland ridges. They present a problem with much room for speculation. The cairns are mostly small heaps made almost entirely of small stones, the heaps rarely more than a few feet in diameter. They have not been proved to be burial mounds but they may be connected with burial ceremonies and probably represent the cemeteries of the Urn-field folk of Middle Bronze Age. In the absence of excavated material only a wide date range can be offered, probably 1500–500 B.C. Some of the cairn groups are associated with small fields and banks which are characteristic of some Middle Bronze Age cultivation areas. The cairns are so numerous—more than 50 groups—that only the more striking groups, easily found, are listed.

Allan Tops (NZ 828028), 6¼ miles south-west of Whitby; about 75 small cairns around a group of enclosed areas, probably small fields or cultivation plots.

Crown End (NZ 668075), 1½ miles south-west of Castleton; settlement and cairns. An enclosure with many hut circles; south-west of it a circular enclosure 250 feet in diameter, with two entrances and a bank set with large stones. A ditch and bank cuts off this spur from the adjoining moorland.

Danby Rigg (NZ 710065) 1½ miles south of Danby. The ridge is separated from the moor by ditches and banks—one of these is the 'Double Dyke', with three banks and two ditches. There are over 800 small cairns on the Rigg and the remains of a burial circle, described on page 33. There are a few 'Celtic fields'—rectangular enclosures—close by at NZ 718064, which may belong to the whole group.

John Cross Rigg (NZ 905025), 5¼ miles south-west of Whitby; here is the largest collection of cairns, over 1,200 closely grouped and associated with a double ditch. This is sometimes called Shooting House Rigg, on Fylingdales Moor.

Thompson's Rigg (SE 882922), 7 miles north-east of Pickering. About 100 cairns on a spur above Crosscliffe Beck.

The fact that very few hutments are known in association with these cairn groups probably indicates that such dwellings as there were,

were made of timber or may have been skin tents, requiring little or no foundation, but quite adequate in the good climate of the Bronze Age. The mainly pastoral farming would leave little trace beyond the occasional cattle pounds and possible boundary banks and ditches. The surprisingly large numbers of barbed and tanged flint arrow points found on the moors suggests that hunting played an important part in the economy.

The stone cairns have been attributed to the Urn-field folk of Middle Bronze Age. The name comes from their general custom of burying the cremated remains of a body in a roughly made urn, under a circular mound, and of grouping mounds in definite areas. Some circular barrows are 30 or more feet in diameter and several feet high, and these are usually spaced out in prominent positions along a high hill ridge or over a moorland summit. They may cover the remains of individuals who were more important than those remembered by the small stone cairns. On the North York Moors the large barrows are called 'howes' and they occur in great numbers—more than 3,000—and many of them have individual names, e.g. Green Howe, Lilla Howe, etc. Many of them are aligned along ridges and watersheds and have been incorporated into mediaeval and later boundaries. A great many of these barrows have been dug into and robbed without record of what was found, but others have been excavated and have thrown much light on the burial customs of the time. Two might be quoted as examples of a very great class.

Loose Howe (NZ 703008). Danby High Moor, $4\frac{3}{4}$ miles south of Danby. 60 feet in diameter, 7 feet high. The burial was of a body fully clothed and with a bronze dagger, placed in a wooden dug-out canoe with a second canoe as cover and a third one alongside. A second burial was of cremated bones in an urn, accompanied by a stone battle-axe and bronze dagger. It would date about 1600 B.C. The grave goods are in the British Museum.

Western Howes (NZ 682023), Danby High Moor. A group of three barrows, the largest 32 feet in diameter covering two cremated burials with urns. One of the other two covered a cremated burial but the third mound was barren.

The fields and settlements of the Urn-field people have been given passing mention and a close study shows that they are surprisingly few and indistinguishable from fields and enclosures which may possibly belong to the succeeding Iron Age. Great areas of Iron Age fields, huts and villages such as those of the Pennines, are completely absent here. The only unquestioned sites belonging to the early Iron Age are two chariot burials and a habitation site. The earliest Iron Age people settled in the south-east of England and their furthest north site is Castle

Hill, Scarborough, (outside the Park), where a number of rubbish pits partly under the foundations of Roman buildings, contained pottery both of late Bronze Age and early Iron Age (Hallstadt) types. This site is well preserved and should be visited. At *Cawthorne* near the Roman Camp (SE 784899), a burial mound covered a two-wheeled chariot, with wheels 3 feet in diameter. Another chariot burial was found at *Pexton Moor* near Pickering (SE 848853).

There are two earthworks described as promontory forts which are probably of Iron Age. *Boltby Scar* (SE 506857), on the edge of the Hambleton Hills is a semicircular area of about 2½ acres, with a steep cliff on the west side and a bank and ditch, 25 feet across, on the eastern side. There are three barrows within the area, one with an urn burial but these are earlier than the fort which dates between 500 and 100 B.C. A recent excavation has found Iron Age pottery in the ditch. At *Roulston Scar* (SE 514816), three-quarters of a mile south of Sutton Bank, a short ditch and bank cross the neck of a promontory cutting off an area of 53 acres. This fort probably belongs to the second century B.C.

A more common feature of the moors is the grouped dykes which sometimes extend a mile or more. *Cleave Dyke*, which crosses the head of Sutton Bank, runs most of the distance between Boltby Scar and Roulston Scar, a short way back from the precipitous western-facing hill scarp. Further north, *Urra Moor Dykes* (NZ 570021), and *Park Dyke* (NZ 612084), are in a similar relation to the western scarp of the moors. The best known group is probably the *Scamridge Dykes* and their associates, nearly three miles north of Ebberston, occupying an area nearly three miles square around Scamridge Farm, and centring on SE 897857. None of these dykes can be given a satisfactory date and some may even be mediaeval.

It might well be asked why the North York Moors, and particularly the central part of them, are rich in remains of the Bronze Age, but seem to have been far less used by later settlers. This question could only be answered by reference to the changing climates which have been revealed by the extensive study of the pollen content of peat deposits, and the reconstruction of temperature and moisture conditions from such studies. We now know that the climate after the Ice Age was subject to large-scale variations and that the tree cover and vegetation in this country has evolved through several different associations. When the first men of the Mesolithic Age were hunting and fishing in this area, the climate was cool and dry, becoming warmer, and the tree cover was mainly of hazel, pine and birch. Conditions were good for hunting on the high moors. The climatic period called the 'Atlantic' which followed from about 6000 to 3000 B.C. was marked by an increased rainfall, but a continuing warmth. Towards the end of this period the Neolithic

settlers used the edges of the uplands, on well drained sites. The Bronze Age lies within the period called Sub-Boreal, cool, dry and becoming steadily warmer. The woodlands spread over the hillsides and were mainly of alder, oak, lime and ash, the moors were dry and it was possible with the knowledge these people had, to cultivate grain and to increase their herds and flocks on the good pastures to be found widespread over most of the area. This was probably the optimum time for the occupation of the high moors. The Iron Age was within the Sub-Atlantic climatic period, colder and much wetter than today, a time when the high moors would be very wet and boggy, and at their very least attractive condition. Well drained and sheltered sites on the hill slopes, to avoid the boggy moors and marshy valley bottoms, were the sites most used by Iron Age men.

ROMAN REMAINS

The Roman remains in the Park are very few indeed—no fort, villa or permanent site has been found on the moorland area, and apart from a few finds of coins, the Roman remains are confined to the Cawthorne Camps, Wade's Causeway, and the Signal Stations on the coast. South of the Park, Malton was one of the important Roman forts, built probably in the Agricolan period and being the most important station east of York, with a history from the first to the end of the fourth century.

Cawthorne Camp (SE 785901), about 5 miles north of Pickering, is unique in Britain and appears to have been a temporary camp, hurriedly constructed possibly under war conditions. It occupies part of the ridge between Newton Dale and Rosedale, with a steep scarp on the immediate north of the site. There are four enclosures, not very easily seen among the growth which covers the site. The enclosures are in two pairs, three of the enclosures rectangular and the fourth one elongated and irregular. The first two to be built are the easternmost one and the irregular one, both of them with earthen and turf ramparts with ditches and with entrances protected by outcurved banks. In the irregular enclosure there are many earth mounds which may be the foundations of huts and other buildings. The other two enclosures are slightly later with stronger banks, and the very square western one appears to be an incomplete permanent fort. The pottery and other evidence from excavation suggest that they are of the date about A.D. 110 to 120

Wade's Causeway is, in parts, one of the best preserved roads of Roman Britain. It runs north-east from the camps at Cawthorne to the river Esk near Grosmont, and for five miles from Cawthorne over the Pickering and Wheeldale Moors its line is very clear. Near Hunt House, south-west of Goathland (SE 806979), the road, 16 feet wide, is uncovered. It is made with flat stones laid on gravel, with side gutters and culverts. A stretch of nearly a mile has been preserved by the Ministry

of Public Building and Works and makes a very imposing monument (Plate XII). Beyond Grosmont the line of the road is less clear, and though heading towards Goldsborough, may more likely have gone to Whitby.

The most interesting remains in the north-east are the signal stations built in the fourth century A.D. By the middle of that century the raids of Saxon pirates along the east coast of Britain had become numerous and serious and were coinciding with inland raids by the Picts from Scotland. These raids reached a high peak in A.D. 367. Towards the end of the century Theodosius undertook the rebuilding of destroyed defences and it was he who extended the old system by planning the series of signal stations on the north-east coast. Five stations were built between the Tees estuary and Filey Bay, each consisting of a high watch-tower of timber or stone, placed within a massive protective wall still further protected by a wide ditch. From the towers watch was kept for sea-raiders and messages could be passed inland and relayed to the Roman fleet and army.

Signal stations were set up at *Huntcliffe*, a mile east of Saltburn, at *Goldsborough* (NZ 835151), *Ravenscar* (NZ 980019), and at Scarborough Castle Hill and Filey outside the Park. The one on Castle Hill, Scarborough is beautifully displayed and should be visited. The foundations lay near the cliff edge within the Castle area, and in fact about one-third of the station has been lost by cliff erosion. The watch-tower was 50 feet square and must have been about 100 feet high and it probably housed the garrison. The enclosing wall stood 25 feet from the watch-tower wall, with rounded corners and with projecting towers at each corner. At 30 feet beyond the walls, a ditch enclosed the whole site. At *Ravenscar* an inscription found during the building of Raven Hall Hotel, about 1774, suggests that the hotel covers the signal station site.

Goldsborough Signal Station is similar in plan to Scarborough, but is unique in standing a quarter of a mile from the sea on Scarth Hill. The site, like Scarborough, is in the care of the Ministry of Public Building and Works. *Huntcliffe* is a mile east of Saltburn on the edge of a precipitous cliff, the erosion of which has taken away two-thirds of the original site. The plan is identical with Goldsborough. The well within the fort was cleared out and evidence was clearly revealed that the station was destroyed violently in a piratical raid, in which refugees and the families of the garrison were put to death. The destruction of the signal stations in the end of the fourth century is suggested by coin evidence and the conclusion is forced upon one that they can only have been occupied for a very brief period, probably less than twenty years.

PLATE VIII. Rye Dale and Easterside—the woods and hedgerows provide a rich habitat for birds and wild plants. This is a typical 'dale' habitat

PLATES IX and X. Birds of the Park: (left) Golden Plover; and Curlew

PLATE XI. Daffodils at Farndale

PLATE XII. 'Wade's Causeway'—the Roman road from Wheeldale towards Stape

PLATE XIII. Pre-Conquest sundial with Anglian inscription at Kirkdale Church

AFTER THE ROMANS

The Roman troops withdrew from Britain about 410 A.D. but during the next forty years there is evidence that a number of Romans returned to the south-eastern parts and occupied some of the towns such as Richborough, and much of East Anglia. The Saxon raiders harassed the east coast during this period and a useful way of entry to the interior was provided by the Humber estuary, leading to the Wolds and into the Vale of York. The Wolds and Holderness, with much of the lower course of the Ouse and Trent, were soon settled by Angles and became known as the land of the *Humbrenses*. It is probable that under the pressure of this settlement many of the less Romanized Britons on the fringe of the Roman areas, escaped into the desolate country of the Cleveland moors, living there in poverty with very few permanent villages. The place names of Cleveland include a number of British or Celtic names of hills and natural features and there are two British village or community names. Wardle Rigg is on Goathland Moor (SE 817953), and the oldest form of the name in 1252 is Waldel Rigg, *wal-del* being derived from *wealh dale*, the dale of the Welshmen. Welshmen was the general name given by the Angles to the native British stock and it is met in many parts of the north of England. North of Danby Beacon there is a place High Waupley and near it, Waupley Moor. In 1226 this was *Walpol* and in 1231, *Wolpolhou* 'the 'howes near the Britons' pool'. There are clusters of British place names around Glaisdale and Commondale, and also near Farndale, sufficient to indicate a fairly wide spread of Britons either settled there or roaming the hills over a very wide area. The names given by the Angles to the small British communities suggest that the two were contemporary though they had little contact.

Soon after the first settlement there was a northward movement of some of the Humbrenses, some up the Vale of York making use of the Roman roads into the Tees Valley, and others along the coast, going by sea. Sea-raiders made their way to Robin Hood's Bay and to Saltburn and later, in the sixth century, they continued their northward migration into Northumberland where they established Bamborough as their capital. At Robin Hood's Bay and at Saltburn there were pagan cemeteries which by their size and contents indicate that these raiders made fairly large communities and may even have built villages on the cliff top. At Saltburn over forty burials were found on excavation, with urns, beads, a bronze-gilt brooch of the sixth century, an iron axe and other grave goods typical of a pagan cemetery. At Robin Hood's Bay a comparable group of urns, beads, brooches and other objects were found. Throughout the sixth century these cliff top villages were probably the

only Anglian sites in what is now the National Park. The Humbrenses had been welded into the kingdom of Deira and the area beyond Durham into Bernicia, and Aella became the first Deiran king in 585. In 626 an attempt was made to assassinate the king Edwin but the attempt was unsuccessful, though one of the king's ministers, Lilla, was killed in saving the king's life. Lilla was given a very rich burial in one of the many prominent Bronze Age 'howes' or burial mounds, then renamed '*Lilla Howe*' (SE 889988), the burial being accompanied by several rings, ornaments and a brooch of gold, and some silver ornaments. A mile west of Hawnby in Ryedale, on the long hill spur above *Sunny Side Wood* (SE 529893), there is another important burial of Anglian times, that of a young woman of rank. She had round her waist a leather girdle with a gold clasp, a bronze bowl at her head, and many ornaments. From these burials we can assume that in the seventh century the Angles were penetrating into the dales in a few places.

In the seventh century also, two monasteries were settled, one in the Park at *Lastingham* in 654 by Ethelwald, son of king Oswald, the other at Whitby (*Streonaeshalch*) in 657 by St. Hilda, kinswoman of king Oswy of Northumbria. From Whitby a daughter house was founded at Hackness in 680. Lastingham was described by Bede as being set among 'steep and solitary hills, where you would rather look for the hiding places of robbers or the lairs of wild animals than the abodes of men'. This is probably a fair comment on the wildness and lack of any permanent settlement on the hills of the north-east.

A study of the place names can afford clear evidence of these invading Angles who gave their settlements names which mostly terminate in *-ley* or *-ton*, these being the modernised forms of *-leah* and *-tun*, which relate to a clearing in woodland or to an enclosed farmstead. The Angles also used a termination *-ham* though to a less extent. The place names at once show a settlement along the whole south-facing foothills of the moors which form the north flank of the Vale of Pickering from Helmsley eastward. In succession there are villages named Carlton, Pockley, Appleton, Sinnington, Wrelton, Middleton, Thornton, Wilton, Allerston, Ebberston, Snainton, Brompton, Wykeham, Hutton, Ayton, Irton, and others scattered over the Vale of Pickering. This group of names is extended only a short way into the hill country—Lockton, Levisham and Newton form a small cluster four miles up Newton Dale, but there are a few others. This long array of -ton names with a few -ley names, gives us a picture of the many Anglian families settling in their family farmsteads on the good ground of the hill slopes or in a few villages cleared from the woods, all so placed as to have good pasturage on the hillsides, meadow ground in the edge of the drained lake Pickering, and arable fields on the foothills.

The Anglian names are fewer on the western side of the Park but become common around the north-west, Stokesley, Ayton etc. and around the north of the Cleveland Hills, filling in the lower Tees Valley. This settlement was probably mainly seventh century. There are a few names which are indicative of an earlier pioneering settlement, Fyling, which is the 'place of Fygela's family or people', and Gilling, from which a later offshoot settlement was made at Gillamoor. The general picture thus emerges of the settlement of the area by a few pioneer venturers probably in the early sixth century, their location being marked by the names in *-ing*, followed by a much greater and more organised incoming in the late sixth and probably early seventh century, the people being farmers living in small family groups, clearing the ground for farms which became the nuclei of the villages which were well established by the time of the Domesday Survey.

There is no further recorded history of Cleveland until the harrying by the Danes in 867 when Lastingham, Whitby and Hackness were destroyed with most of the smaller churches which had been built under their influence. In 876 Halfdan declared a peaceful division of the lands now conquered by the Danish invaders, and his followers were rewarded with grants of land in, among and around the lands already held by the Anglian people, as well as in some new areas. The Danes soon accepted Christianity and set up churches as well as recognising several older church sites, giving them the name 'kirkby', the church town.

If we look again to the place names to help in the recognition of some of the places thus occupied by the Danes, we can rely on the termination *-by*, used by them for a small farm or hamlet. The village sometimes carries the name of the person who founded it, as Faceby, the Feitr's-by, Thirlby belonging to Thrylli, Causby from Kausi, and so on. The bulk of the villages ending in *-by*, lie in the Vale of York and the verge of the western edge of the Park, where we find Easby, Battersby, Ingleby, Busby, Faceby, Swainby, on the north-west corner, and Ingleby, Thimbleby, Cowesby, Boltby and Thirlby along the foot of the western scarp with four Danish church names, Kirkby, Kir(k)by Knowle, Felixkirk and Cold Kir(k)by. One Dane penetrated into Ryedale to found his farm or 'town' at Hawnby and some others named Oswaldkirk, Kirkbymoorside and probably Kirk Dale. There was apart from this very little Danish settlement on the southern flank of the Park where Anglian villages were already so numerous. On the east, Scalby and Whitby, and in Eskdale, Aislaby, Ugglebarnby and Danby, with Barnby, Muckleby and Ellerby, Boulby and Roxby completing the picture in the north-east and emphasising that some of the Danes penetrated from a few points on the coast as well as by the main invasion by the Humber. It was the Danes who divided Yorkshire into its Ridings and the county

into its Hundreds or Wapontakes, the Park area lying in the Wapontakes of Langbargh, Pickering and Lythe, and Whitby Strand.

The Danes soon accepted Christianity, and carved stone crosses, probably following earlier wooden ones, were set up at some of the churches and some of these remain as the most important monuments of the period. The custom of setting up crosses of wood and later of stone, elaborately carved, spread through Northumbria from Hexham during the eighth century; they were set up first as preaching crosses in places where churches did not yet exist, but were soon used as memorials set up in the precincts of a churchyard possibly to commemorate a priest or some very important person. The Anglian motifs on the earlier cross shafts were dominantly panels of interlacing bands associated with figures in high relief, and these were being cut at the end of the seventh century along with scrolls of leaf and vine and with birds and animals among the scrolls. With the Danish influence dragons replaced animals and finally in the Norse period, the dragons became tangled in their own tongue and tail which both became a part of the involved interlacing around them, as can be seen on one of the Ellerburn cross fragments. The bulk of the crosses and cross fragments now to be seen are Anglo-Danish or Anglo-Norse of the tenth or eleventh centuries. In the eleventh century and later there was a great replacing of wooden churches by stone buildings and the crosses from the churchyard, possibly regarded as pagan because of their strange ornament, were often used as available stone for the new building, so that carved fragments are still seen as building stones used in an early church tower or some older part of the structure.

There are not many Anglian crosses in the Park, but at *Hackness* there is one with a runic inscription and a Latin memorial to Aethelburga, which was set up before the Danish invasion (see page 82 and Plates XIV & XV). At *Lastingham* there are fragments of three Anglian crosses which had been built into the church walls. The Anglo-Danish crosses, mainly tenth century work, are represented at *Arncliffe*, *Kirkbymoorside*, *Oswaldkirk*, with late tenth and early eleventh century Anglo-Norse carvings more widespread at *Ellerburn*, *Hawsker*, *Kirkby-in-Cleveland*, *Lastingham*, *Levisham*, *Oswaldkirk* and *Upleatham*. A form of gravestone, the 'hog-back' made and carved in the eleventh century under Norse influence is to be seen at several places. It is a heavy stone, rectangular but in a solid shape and carved roughly to represent a long low house; the ridged roof is generally cut in a pattern resembling tiles. At Brompton near Northallerton a special form seems to have been invented, in which each gable of the 'house' is clasped by a bear, its arms extending along the roof. Examples of the 'bear hog-back' are to be seen at *Lastingham*, *Stainton-in-Cleveland*, *Osmotherley* and *Sinnington*, and one from

Ingleby Arncliffe is in the collections at Durham. *Kirkdale Church*, just on the borders of the Park, should be visited for the finest of the Viking grave slabs and for the wonderful sundial with a long inscription, made and erected in the ten years before the Norman Conquest (Plate XIII).

In 1015 Cnut invaded the north and conquered Northumbria then set up his kingdom over the rest of the country. Before this, in the tenth century there had been a considerable Norse settlement of the Pennines and Lake District from Ireland and a Norse occupation of York. The dialect, place names and the cross motifs all show that the Norse penetrated into the north-east moorlands and occupied much of the upland which they would find quite homely as a race of upland sheep farmers. In the eleventh century the Norse penetration of the higher moors was completed, though the Norsemen settled few if any villages, preferring to live in separate farms and shielings, widely scattered with as much free range as possible for their own flocks and little contact with those of their neighbours. The Domesday Survey shows a good blending over the area of Anglian, Danish and Norse names and we can thus picture the population as being a composite group of general Scandinavian origin, which had come to the area in a series of migrations over five centuries and which, in the main, had chosen the type of land which it desired for its own particular form of agriculture, arable or pastoral.

A feature of the central moorlands that will be noticed by all visitors, either on foot or by car, is the number of named 'crosses'. These only rarely have the form of a cross, the best being Ralph Cross (677021, Plate XVI), Mauley Cross (797944) and Lilla Cross (889987); most are stone shafts with no cross arm, set in a massive base stone or socket. Two examples are stumpy and are called 'Stump Cross', a name commonly found on the Pennines for similar monuments. These crosses to the number of about thirty are mainly to be found on the high moors to the south of Eskdale from which the many dales run to the south. Little is known about them but because they are frequently found alongside ancient tracks and roads and have sometimes been used as boundary points for ancient parishes or townships, at the same time being often good landmarks, they are assumed to be of mediaeval date. They may have been provided by the monasteries as way-marks for the benefit of travellers across the wilder part of the moors, or for their own monastic servants journeying between the parent monastery and distant granges. Whatever their origin they have at some time aquired names most of which have lost their significance. Percy, John, Ana, Redman, Anna, Ralph and Job crosses may preserve the names of real people about whom some story could have been told in past centuries. Fat Betty (682020) and Stump (745095) earn their names by their shape or appearance, while some, High, Low, Botton, Brown Howe and others

are named from their position. Most of them are marked on the one inch to one mile Ordnance Survey Tourist Map of the Park area and any visitor crossing the central moors can easily locate and see a few of them.

5

Mediaeval and Later Settlement

by MAURICE BERESFORD

THERE are 113 civil parishes which lie wholly or partly within the Park and even more villages, since some parishes contain more than one. As one would expect, the villages are sited on the more fertile edges of the moors or within the shelter of the valleys of the Rye and Esk. Near every village lay its fields, and those villages with the moors at their back could utilise the higher ground for grazing. Thus the moors have been largely annexed to the villages and the parish boundaries cut back into the moors, sometimes (as at Helmsley and Pickering) for over eight miles from the village.

Nothing is more unhistorical than to think that the view from some vantage point in the Park, even the most remote, is a wide expanse of Nature pure and undefiled. The landscape of the Park is Nature much altered by man, both prehistoric and historic. In pursuit of a living, its successive inhabitants have changed its vegetation, its topsoil, its drainage and imposed on it those structures and tools of a farming livelihood which we call farms, villages, roads, walls and the like; its rocks and minerals have been cut from it and the hills scarred with the debris.

The one-inch Ordnance Survey Tourist Map is a multi-period map which enables the present appearance of the land within the Park not only to be viewed but in some ways to be explained. It shows not only the physique of the moors but the works of man upon them, from prehistoric earthworks shown by Gothic type to the railway tracks which wriggle through the heart of the Park and cling so picturesquely to its seaward flank. The railway is a work of nineteenth-century man; the coastal line was designed to get passengers and goods to and from the ports and seaside. This line was not encouraged or created by the moors and it took the easiest (but not very easy) way and edged past them. The line from Pickering to Whitby through the moors only went that way because a rival had already occupied the coastal route. But a disused line like the track which climbs to 1,400 feet on its way from Battersby to the head of Rosedale was a creature of the moors, linked to the exploitation of the moors' minerals. Indeed, recent historical change has been too fast for the Ordnance Survey map, and the 1958 Tourist Map shows the coastal railway north of Whitby which is now only an historical monument, its death a sign of the preference of passengers for their own vehicles or for the buses and coaches of the moorland highways.

The moorland highways, part the creation of the stage-coach age before the railways and part the creation of the motor-car age, thrust their way boldly across the high moors. But the moors are laced with tracks, formal and informal, of other periods. There are, of course, the lengths of Roman roads; but there are also roads created to give access to farms, pastures, mines and quarries. Saltergate (first mentioned in 1335) is the moorland road from the coastal salt-pans. There is a long stretch of abandoned coach-road (marked on the map as Robin Hood's Bay Road) which leaves the Pickering-Whitby main road on Lockton High Moor for six lonely miles of Fylingdales Moor; its past is commemorated in the name Coach Wath (wath-ford) (SE 872969).

Alongside these arteries are the hundreds of local tracks and paths which are the veins and capilliaries of the old economies. The main aim of these tracks was to get men, animals and vehicles a short distance from home to work; home being a farm, perhaps; work a field, a sheepfold or a coalpit. Consider the web of lanes which focuses on the isolated church of Danby (NZ 696064), the ways by which the parishioners of this 23,000 acre community have come for their baptism, marriage and burial.

Our first great historical gazetteer of the villages and hamlets of England is Domesday Book and although those who collected the local information for William the Conqueror in 1086 were instructed to look backwards, the limit of their gaze was fixed at the last year of the Old English monarchy, 1065.

Within the area of the Park there were 69 separate places mentioned in Domesday Book, varying in size from manors that were waste and empty to the manors of quite flourishing villages. As Fig. 1 shows, there had not been much penetration above the 800-foot contour. The favoured site for a village was on the edge of the moor or in a valley. This was the natural choice for the immigrant families from Europe who colonised the area, for their whole way of life was closely linked with the plough and with cereal crops. High and cold land, rocky or poor soils did not attract the plough so long as there was any choice left, and by 1065 there was still some choice. It was only in the next two hundred years that the continued increase of population extended the demand for land and caused settlement to move further up the valleys and up the moorside.

Village life hinged on the growing of cereals because cereals alone gave bread, and no market system existed which would guarantee a supply of bread in years of bad harvest. To cultivate cereals was a simple life-insurance, and it was continued even in those later-settled hamlets where situation and soil favoured stock-rearing. In 1086 there

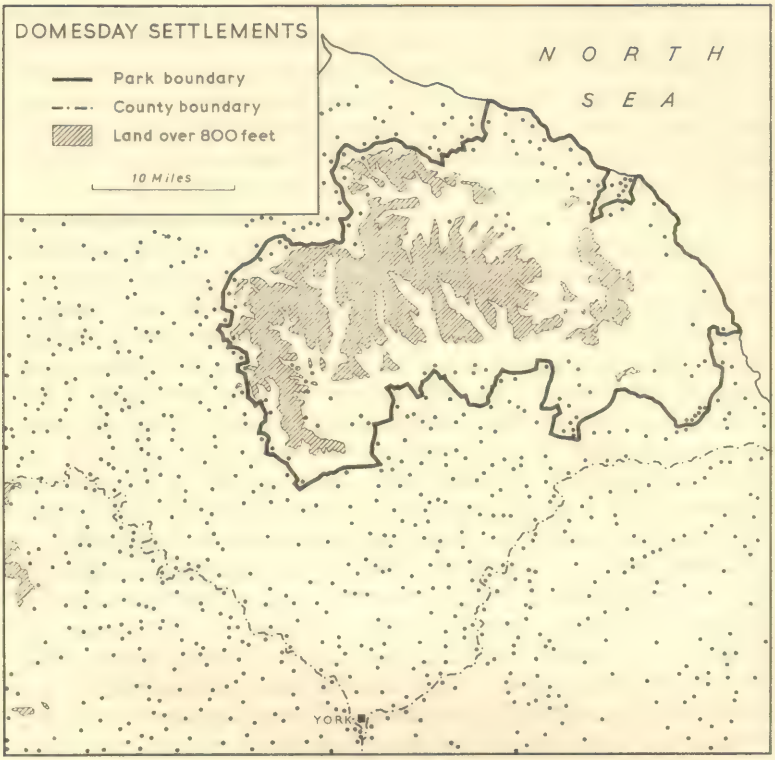


Fig. 1

were ploughs in the little village which Domesday Book simply called 'Dale', in its side valley of the Rye opposite Hawnby.

The existence of a great reservoir of potential pasture ground on the back doorstep of the villages was an incentive to extend the pastoral element when a market for meat, wool, hides and milk was developing. A moor-edge village like Carlton or Faceby was able to make the best of both worlds; to grow corn and to support larger herds of sheep and dairy cattle than could a village in the plain a few miles to the west. But the sign that the moor-edge villages were originally designed for plough-using villagers is twofold. Firstly, there was the extensive spread of open arable fields; whatever minor differences were imposed by the abundance of nearby grassland, they were basically akin to the open-field villages of the Vale of York, the north-eastern plains and the Midlands. Secondly, there is the fact that the villages are nucleated, that is, with their houses situated close to each other along one or two streets (see

Fig. 3 and Plate XVII). This concentration of living is characteristic, all over Europe, of those who have to make a living together. On the coast, houses gather at a creek or harbour; inland, the nucleated settlement is the mark of arable farming. It was the plough which yoked together single oxen to make up a team, and it was the individual households who each supplied an ox to the team. Without a number of households adjacent to each other there would have been no plough-team.

The compulsion to live so near one's neighbours was also strengthened by the many activities of the farming year which demanded man- and animal-power beyond the capacity of a single household. Clearing land from trees and scrub; draining land: these were essential if a growing population was to be fed, but if time was to be spared during a busy farming year it was only possible when there was a working group big enough to be able to spare effort for investment of this sort in new acres. Each fresh block of cleared land was shared out among the group—another tie—and systems of common grazing over the fallow stubble made even the village animals part of a communal economy. It was a natural extension of this experience for much of the permanent grassland of the adjacent uplands also to be regarded as communal; that is, as a common. There is one expression of this still left: Fylingdales Moor was the common grazing of three villages, Hawsker, Stainsacre and Fylingdales. Nearby, at Lilla Howe (SE 889988), the moorland of eight townships met. We must imagine these eight villages pushing their occupation of the moorland further and further from the eight village centres until eventually there is no acre unclaimed. Until about 1260 the men of Ampleforth and Sproxton intercommoned in Sproxton Woods, but by 1290 the population had grown and the wood became solely Sproxton's.

As population grew, it was sometimes convenient to organise or to tolerate a second settlement at a distance from the first. Thus Fyling throws off Fyling Thorpe. Indeed, even by Domesday times that process had gone far. We must not imagine that all the villages recorded in 1086 had been founded simultaneously. The priorities are sometimes hinted at by pairs of names, such as Gilling and Gillamoor, Fyling and Fyling Thorpe already mentioned. Eventually, certainly before 1065, there were few villages more than a couple of miles from a neighbour (see Fig. 1).

It is characteristic of countryside which was sparsely populated and slow to be settled that parishes were large. The 40,000 acres of Helmsley parish or the 31,000 acres of Pickering can be contrasted with the many parishes of the Yorkshire plains which have only between 1,000 and 1,500 acres each. Clearly, there was nothing like the density of population in Pickering parish that there was in one of these smaller parishes, or its church would have had to be the size of a cathedral.

Another sign is the parish with many townships but only one church to serve them; what we would seem to have here is an original village near the church and a ring of farmsteads which have been thrown off in the process of colonisation. Most of these farmsteads had developed into villages by the time of Domesday Book but the power of the mother church has been sufficient to resist their claim to have independent churches of their own. Roxby in Hinderwell, for example, had no church until 1423 and then only a dependent chapel.

This pattern is seen in the 30,000 acre parish of Lythe in the north-eastern quarter of the Park.

THE PARISH OF LYTHE *with its 9 townships and 11 villages. Sites of villages:* X *[site of Griff, alias Mulgrave, is conjectural]*

Fig. 2

Lythe church served eight townships other than Lythe, and each of these had a village. Indeed, Barnby township now supports two villages;

and in Lythe township there was once a second village (Griff *alias* Mulgrave) between Lythe and Hutton Mulgrave which has since disappeared, probably into Mulgrave Park. Each of these townships within Lythe had its own open fields and commons; and four of them each extended over more than 2,000 acres. A similar picture of very sparse settlement on poor quality soils is seen in the parish of Pickering; the village of Marishes is five miles south of Pickering, but both are in the one parish. To beat the bounds of Pickering parish would have taken a very long Rogation Week.

Another indication that the interior of the moors was not greatly favoured for colonisation can be seen in the fact that in the twelfth century it was attractive to Cistercian monks who were seeking a place remote from men for their new Houses. The great villageless spaces of Fig. 1 were ideally suited, and with land of such poor value it is not surprising that landowners who were patrons of the abbeys of this area were willing and able to make very large donations of land. The foundation charters show the abbeys being granted some land in the fields of existing villages but there were also generous allocations of uncultivated land with permission to colonise (or *assart*) it. Rievaulx was founded in the huge parish of Helmsley.

A final pointer to the limits of colonisation in the Norman period is the extent of the royal Forest centred on Pickering. Although no one now believes that the Forest was one continuous wood, the land preserved for hunting stretched from the sea across to near Rievaulx and far up into the moors. Within this area there were villages, but rather as islands in a sea, oases in a desert. When the Crown was weak, local landowners were able to press for a lenient interpretation of the preservation of the chase, and for permission to assart and plough land within the Forest bounds to meet the demands of population and profitability of food growing. When the Crown was strong it was able to widen its claims and make permission a more expensive purchase.

It is an odd irony of economic history that the development of the demand for wool gave an unexpected value in the centuries after the Norman Conquest to land which the ploughmen had spurned and which had been given in such quantities to the abbeys. The scatter of *Granges* on the map indicate some of the outposts of monastic farming, carried out by the lay brothers of the order. The Duchy of Lancaster, and after 1399 the Crown, also shared in this windfall since much of its Pickering estate lay on land suited to sheep.

In every way except one (to be mentioned below) it seems that the high-water mark of village and hamlet creation was reached by 1300. In places, indeed, the actual frontier of field and moor was then struck as far into the high places as it was ever to go, even in the ploughing up

campaigns of the Napoleonic and two world wars. But the frontier was not a continuous line and there were other places untouched by mediaeval agriculture which more recent techniques have brought into cultivation, but these newer conquests have largely been from old centres of settlements or from older farmsteads. In general, the last 600 years have not seen any additions to the villages and hamlets of the area except for non-agricultural reasons.

Agriculture has not been the sole determinant of settlement within the Park. There have been periods when a landowner has looked under, rather than at, his land to see its greatest riches. Long before minerals were taken from the earth in any quantity the quarries of the moors had taught this lesson. Abbeys, like castles, needed stone; and almost every village had its quarries for building and repairing the village houses. Barns and sheepfolds, like the walls of the fields, could be built from outcrops of stone or from the stones taken off the surface of the land when it was first cultivated. The map shows many abandoned mines of coal and iron within the National Park; it is not easy to disentangle mediaeval, Tudor-and-Stuart and eighteenth-century mines for coal and iron, but the published cartularies of the local abbeys make the search for mediaeval mines possible. On and near the coast are the scars of another celebrated mining venture, the Stuart explorations for alum (see page 57) which became involved with a celebrated monopoly controversy and the fortunes of Sir Arthur Ingram of Temple Newsam and Sheriff Hutton and of Lionel Cranfield, Lord Treasurer.

The numerous castles, ranging in size and survival from Helmsley down to the smallest mottes, are the monuments to the great feudal industry of warfare. Here, with the old highway from York to Yarm running along the western scarp of the moors, the enemy against whom the castles were garrisoned was sometimes the Scots from over the Border: but the castles were also part of a display of sovereignty and baronial strength as well as places of refuge for smaller neutrals in the civil wars. Their masonry and artificial earthworks must have swallowed up a good deal of the income that came to the seigneurs from the forest and the fields.

The parish churches of the area can also be looked upon, in a narrow way, as an expression of the wealth of the area in historical times. Like the abbeys, they demonstrate not only piety but local wealth which gave expression to piety in buildings for which quarrymen and masons had to be paid; for which lead and timber had to be obtained and for whose maintenance an endowment in glebe and tithes was necessary. In many, perhaps most, of the villages within the Park the church is the only surviving building which shows any handiwork of man earlier than the reign of Elizabeth I.

Finally in this review of the livelihoods which gave rise to the pattern of settlement, there is the sea. The Park bounds have been drawn to exclude the two great mediaeval ports of the area, Whitby and Scarborough, and the remaining part of the coast had cliffs too steep to encourage the early development of fishing villages. The name Runswick is first recorded in a document of 1273 but there was probably no village there; the document is concerned with the rights of the lord of Skelton Castle to take the profits of wrecks. Sandsend is first recorded in 1254; there were then 53 cottages at Sandsend, and a 'sea-fishery' was among the lord of the manor's assets. Staithes first appears in 1415 as the *staithe* (or landing place) of Seaton; Seaton has now been supplanted by its little harbour-village, for there is only Seaton Hall (NZ 782178) to remind us of the Domesday manor and church. Robin Hood's Bay is not recorded before the sixteenth century. With these exceptions, the villages of the Park looked inward to the moor rather than outward to the sea for their livelihood.

It might well be asked whether there are any maps older than the Ordnance Survey maps which enable a comparison to be made between the 'Then' and the 'Now' of the Park area. Neither the Elizabethan nor the early eighteenth century county plans are on a scale detailed enough to be very useful in this context. The first good map is that of T. Jeffreys which covered Yorkshire in twenty sheets (1771–2). This map is early enough to catch land still unenclosed. C. Greenwood's map of 1817–8 shows the area on the eve of the Railway Age. In the 1850's we have the first six-inch Ordnance Survey plans, and the successive revisions help the detection of changes in the last century.

Nowhere in England are there maps which give details of the open fields of a village in 1500, let alone in the mediaeval centuries; however, the National Parks area is fortunate in having a large-scale plan of one parish surveyed and drawn by the famous Elizabethan cartographer, Christopher Saxton. In 1598 there was a lawsuit between two North Riding landowners, Sir Edward Wotton and Sir William Bellassis, and the court ordered that 'a perfect plott of the places and grounds mentioned in the pleadings' should be made, and Saxton was appointed to make the *plott* or plan. It covered the parish of Old Byland and is still preserved at the Public Record Office, London.

At the dissolution of Byland Abbey in 1538 the abbey lands in Byland parish had been granted by Henry VIII to the father-in-law of Sir Edward Wotton, and the lawsuit of 1598 was principally concerned with the contested bounds between these lands and another abbey farm, Wethercotes, which had been sold in 1538 to the ancestors of the other party. It was therefore necessary to summon the oldest inhabitants of

the neighbouring villages and for the surveyor to perambulate the bounds and the interior of the parish with them. The plan embodies what Saxton measured with his instruments and what he heard from the aged Yorkshire yeomen and shepherds.

The village of Old Byland, like its neighbours Scawton, Murton and Cold Kirby, is set high into the moor, over the 650-foot contour. The limits of Byland parish were set by the deeply-cut side-dales west of Ryedale and by the ridge-road which follows the western edge of the Hambleton Hills; this road, some of it now grass, was shown by Saxton in 1598 as 'the high way betwixt York and Yarum (Yarm)'. The higher, western part of the parish was the permanent pasture of the village; indeed, the land under dispute in 1598 was called after the animals which grazed it and the building which sheltered them—Wethercote (still a farm name, SE 524863); just to the south was Lam(b) Close. At the parish boundary these pastures adjoined the pastures of Cold Kirby, Murton and Boltby. If the higher moorland was suited for permanent grazing, the lower and more sheltered part of the plateau was devoted to the arable fields of the village; and the village itself was in this eastern quarter of the parish. These were common Fields, their strips too numerous to be shown by the cartographer; but with no interior division by walls or hedges. There seem to have been three of these Fields (*Est Feilde*, *West Feilde* and *Landende Feilde*), one of which would have rested fallow each year. There were large fields to the north and south of the arable Fields which were *Cow Pasture* in 1598, grassland of better quality than the higher moorland of wethers and lambs. By the end of the sixteenth century it was no longer so necessary as in mediaeval times for a village to grow all its own corn. When corn could be bought in Helmsley market place it might be more profitable to turn some land to cattle or sheep for the sake of what meat, milk, hides and wool would fetch in the same market, but the precarious situation had been revealed in the bad harvests of 1593-7, immediately before Saxton's visit, with the highest wheat prices of the century and bread riots all over England. On the eastern edge of Old Byland Saxton noted two fields 'somtyme in tillage . . . . but now lying common'. The sheep husbandry of the moors is indicated by two other places on the plan; 'the place where they washe shepe' on the Murton-Byland boundary; and the fulling mill ('walkemill') near the eastern end of this dale; by the mill was 'tenter banke' where the woven cloth was stretched on tenters in the open air. This view of the use which the villagers made of their land is completed by four minor features of Saxton's plan; the little woodland trees which line the main- and side-dales, too steep to be cultivated; the meadows, the *Ings*, in Ryedale and Scawton Dale; the *marlepits* of Scawton Dale where marl had been dug to fertilise the fields; and in *Tyle Howse*

the place where the monks had had their kilns for baking clay into roof-tiles.

In the first census of 1811 there were 21 houses in Old Byland, 20 of these around the village green, very much as Saxton showed the Old Byland of his day with 17 houses and the church. In 1377 the collectors of the poll tax had taxed 33 persons in Old Byland, suggesting a population at the end of the thirteenth century of about 75. It was these 17 or 18 households whose ancestors had cleared the land for the fields of the village and then held back the scrub and woodland from returning. A mile and a half away in three different directions the villagers of Murton, Cold Kirby and Scawton had conquered the moor in the same way, and all over the map the names of other villages are the flags of similar conquest.

There is no law of nature or economics which dictates that a settlement once founded shall always continue. Domesday Book itself records villages since destroyed. If villages arose as part of an arable economy they were likely to decay if arable farming was abandoned, just as surely as miners' houses are emptied if a mine is abandoned. The moors have both types of desertion. The coast also had its dangers. In December 1829 the whole mining hamlet of Kettleness in Lythe disappeared in a cliff-fall.

There have also been migrations. It was always possible for the silting up of a river or the diversion of a road to take away the livelihood of a community. In our own day the by-passing of a village can cause petrol stations and cafes to migrate to the traffic artery. With the coming of the Cistercian abbeys to the moors there was migration of another kind. The Cistercian rule, as we have seen, demanded solitude. This would hardly be possible if there were a village too near the abbey gate. There was no mediaeval village at Rievaulx, however picturesque the present cottages look. Indeed, the village of Griff a mile to the south-east was too near for comfort and was destroyed when Rievaulx Abbey was founded in 1132. The earthworks of the streets and houses of this village can still be seen in the grass field (SE 586838) to the west of the farm (on private land). Byland Abbey (founded in 1177) also caused the removal of a village. The Old Byland of Saxton's plan should really be New Byland, for the original village, as documents make plain, was at Tile House (SE 566867) and it was there by the river Rye that the first Byland Abbey was built and the village transplanted. The fact that Byland Abbey is now itself somewhere else demonstrates that even abbeys could be moved; the cause was a long quarrel between Rievaulx and Byland when only a mile separated them. Things were more peaceable when Byland had moved to its present site, five miles to the south-west.

PLATES XIV and XV. Anglian cross in Hackness Church: (left) north and west sides; and south and east sides

PLATE XVI. Ralph Cross of early but unknown date on Westerdale Moor

PLATE XVII. Appleton-le-Moors. A one-street village with back lanes and common fields

PLATES XVIII and XIX. Rievaulx Abbey: (above) the chancel; and the choir and presbytery

PLATE XX. Scugdale with rows of old jet workings along the hillsides

PLATE XXI. Sandsend—an old centre of the alum industry. Quarries have altered the shape of the headland

The Cistercian abbeys are best known for their contribution to the extension of sheep-farming, for that was a form of agriculture best suited to the poorer quality lands with which they had been endowed and to the lonely places to which they had come. But, like laymen, the abbeys needed to grow grain for their bread, and there were outposts of arable farming in the monastic granges. Here (in the case of Cistercians) lay brothers lived communally and formed the labour force; the village of Griff was replaced by the abbey's grange of Griff, and this passed into lay hands at the Dissolution in 1538 and forms the nucleus of the present farm holding. At Newlass Farm (SE 582865) there are extensive earthworks of other grange buildings.

The Black Death and the subsequent plagues of the mid-fourteenth century transformed the relation of men and land. Villages and fields, as we have seen, had multiplied in conditions of growing population and land-hunger. But now, particularly in the more marginal soils, the demand for land fell, and villages shrank in size while arable land went down to grass. In 1428 it was reported that the village of Whorlton now had fewer than ten inhabiting householders, and the ruins of the church (NZ 483025) remain to remind us of the former village; nearby are the earthworks of the castle and fishponds; subsequent re-settlement of this area has been at Swainby, in a more accessible position at the foot of the hill. The village of Dale Town (SE 535885), on the other hand, was not destroyed by the plagues for it still had twenty-two tenants in 1433 and probably also in 1486. But by 1569 there was simply 'a house called Dale Town'. This village had been abandoned when the landowner converted the fields of Dale Town from their traditional arable use to pasture. It might be asked why it was necessary to supplant ploughs by pasture when there was so much grassland in the moors. The answer lies in the temptation to own larger and larger flocks deriving from the profitability of wool, and this from the development of the rural cloth industry of Tudor Yorkshire.

In the majority of villages the landowners had neither the appetite nor the power to unhouse their tenants, but the agricultural fashion of the sixteenth and seventeenth centuries favoured an increase in enclosed fields at the expense of the commons and the common arable. Some townships had their open fields completely enclosed in this period by agreement between the proprietors, and for such places there is no Enclosure Act. To look over into one of these fields near the village of Thornton Dale is to cross the centuries to that unknown time in the Dark Ages when the first settlers made their *thorn-tun*, their house-enclosure of thorns, and began to create a livelihood from the raw ground around them.

6

Industrial History

by ARTHUR RAISTRICK

INDUSTRY has dealt in a kindly fashion with the North York Moors and its scars are now overgrown and make features still clear enough to provide interest but not such as to disfigure the scene. The traces are largely those of mining for jet, alum shale or ironstone and coal, and each has left its own characteristic mark to remind the visitor of a chapter of history now closed but formerly of great economic importance for the area. The most prominent features belong to the iron working, the Rosedale Chimney, the track of the ironstone railway from Rosedale to Battersby, and the heaps of mine debris around Grosmont and south of Guisborough, but one must also include the remains of Port Mulgrave and some of the huge excavations made for alum shale such as that which has changed the shape of the cliffs at Old Peak, Ravenscar.

THE JET INDUSTRY

By far the oldest industry is that of jet working which was active in the Bronze Age and continued through the Roman occupation into mediaeval times. The jet was used for ornaments, necklaces, brooches, buttons, bracelets, and in mediaeval times for crucifixes and other religious ornaments. Jet however fell into disuse in the sixteenth century but was revived in the nineteenth when jet working became an industry in the modern sense with a turnover which in 1873 was more than £90,000 in annual value.

From Bronze Age times it has been possible to search the foreshore and, with diligence, to find pebbles of jet along the coast, washed out of the cliff strata. Through all the earlier periods of its use, jet was secured in this way and very little was mined before the nineteenth century. In the Bronze Age the jet was used in necklaces made up of a large number of small plates, shaped and mounted in one, two or three strings, the shaped plates separated by beads of many shapes. The whole necklace is highly elaborate and a very impressive piece of craftsmanship. In north-east Yorkshire at least nine necklaces have been found in Bronze Age burials, and another seven on the east Yorkshire Wolds. One necklace was made of 286 pieces, and the largest recorded had no less than 623

beads. Although jet and jet-like substances (shale and lignite) have been found in prehistoric burials in some other parts of the country, it is not possible to prove that there was anything which could properly be called a trade in jet in those times.

The Romans greatly admired jet for ornaments of all kinds, and abundant articles of jet have been found on Roman sites. The finding of worked and partly worked blocks of jet along with jet ornaments in York, suggest that in Roman times that was a centre for its working. In mediaeval times jet was still admired and used for crucifixes and rosaries but there is no evidence of a working centre although one might expect the monastery at Whitby to be in a position to supply much of the demand.

The modern phase of the story starts in 1800 when two Whitby men, John Carter and Robert Jefferson started making crosses and beads for sale to the visitors to Whitby. Soon after this other workshops were opened and a fashion for jet ornaments was growing. By 1850 there were over fifty jet workshops and twenty-five years later the number had risen to two hundred, employing in the whole trade about 1,500 men. It was to supply that great expansion that jet began to be mined. Mines had been opened at the foot of the cliffs from Sandsend northwards to Overdale and then on to Loop Wyke, and also in the cliffs on the east side of Runswick Bay. About the middle of the century mining was extended to the hill scarp from Guisborough to Roseberry Topping and then into the various dales. About twenty mines were opened in a fairly short time and over two hundred men were employed underground seeking jet. Towards the end of the century the jet became more rare and the difficulties of mining it increased so that in 1892 an inferior Spanish jet was imported for the use of the trade. By the end of the nineteenth century, changing fashion and the difficulty of supplies brought the industry almost to an end, though skilled workers are still to be found who find a small outlet for good quality jet ornaments to jewellers and to the tourist trade.

Almost all the small dales on the north and north-west face of the Cleveland Hills show a continuous line of small pit heaps which mark the outcrop of the jet rock. Each of these has been a mine carried underground for as far as the working was economical. They make a clear feature along the hillsides without being in any way offensive, and serve to remind us of a phase in the working life of the area, now past (Plate XX).

ALUM MAKING

The manufacture of alum comes next in economic importance within the Park area, to that of iron making, but as the extraction of alum shale

has been carried on by open quarrying in many places, the industry has left more obvious marks on the countryside and particularly on the coast (Plate XXI), than the iron and jet mining, both of which were mainly underground. Alum, which is the double sulphate of potash and alumina was of great importance in tanning and dying where it was and still is a widely used mordant. Its manufacture was for long a secret of the Arabs and later of the Turks, until the fifteenth century when alum rocks were discovered near Rome and the manufacture as far as Europe was concerned became a Papal monopoly. It was in 1607 that alum shales were first recognised in England at Belman Bank, Guisborough (NZ 623147), and the manufacture of alum started there as a royal monopoly. In 1649 the monopoly was ended and the alum shales which had already been discovered over a wide area were opened up and the industry grew rapidly to great importance. It only declined in the mid-nineteenth century with the discovery that coal measure shales contained material from which alum could be made, and as these were being turned out in the coalfields in tens of thousands of tons, at the very places where fuel was cheapest and most abundant, the industry abandoned the north-east moors and went to the coal fields.

The essential processes in making alum were the quarrying of the suitable shale in vast quantity and the calcining of this by burning in enormous heaps with the expenditure of a large amount of fuel. The burned shale was then leached in water, treated with an alkaline liquor and the liquid so prepared was then concentrated by repeated boilings and crystalisations. The trade used wood at first for fuel, but the large quantitities used soon depleted the available woodland and a change was made to coal; by 1700, 10,000 tons of coal a year were being brought from Sunderland and Tyneside to the Yorkshire alum works, and by 1805 the output of alum had reached 6,000 tons a year, using nearly 20,000 tons of coal.

The visible remains of the industry are the enormous quarries, usually a terrace on the hillside or on the cliffs, with a large tip of treated shale waste. Associated with some of the sites there are ranges of derelict buildings and traces of large areas of leaching tanks. The most important of the works were those on the cliffs at Boulby and Loftus; Kettle Ness and Saltwick Nab have both been considerably altered in shape by alum quarries, and quarries are a large feature also at Sandsend Ness and at Old Peak. The works at Lythe near Sandsend were the most successful and the last to work, being in use from 1615 until 1867. The wharf and buildings associated with this industry still make a big part of the sea front near Sandsend. Inland the alum workings are mainly mines, and, as the shale was generally carried to one of the coastal works to be nearer the coal, only small spoil heaps remain at the mouth of the mines,

spreading along the hillsides marking the outcrop of the shales just as the jet mines do.

IRON WORKING

Iron has been made in Cleveland from mediaeval times. As early as 1207 the family of Bolbec owned forges in Glaisdale, and when in 1223 Cleveland was granted to the Priory of Guisborough many bloomeries for iron making were started. Peter de Brus gave to Guisborough the iron ores in part of Glaisdale, and by 1271 there were five small forges at work round Danby and two more in the forest. Byland Abbey secured a grant of iron ores in Rosedale and made iron there from the mid thirteenth to the early sixteenth centuries. Heaps of scoria produced by similar iron working sites are common in all the northern dales, Glaisdale, Westerdale, Fryup Dale, Danby Dale and others. These iron bloomeries made great inroads on the forests for charcoal burning and depredations on both wood and game were sometimes the subject of complaint. At the assize of the Justices of Eyre for Pickering Forest, held at Pickering in 1334, complaint was made that Sir John Melsa made and sold charcoal. Sir John pleaded that he and his ancestors had from ancient time had the right to work ironstone and keep a smelting place in the woods of Levisham, and the right to all the wood needed for the furnaces. This right was acknowledged.

The monks of Rievaulx Abbey established a forge at Laskill in Bilsdale (SE 562907), and built another at the Abbey, making it just to the south of the Walk Mill. At each of these forges there was a bloom hearth for making the iron blooms, and a string hearth for working the bloom into wrought iron or into bar of any form they wanted. In 1540 there were substantial rebuilding schemes at Rievaulx where the dam on the stream, feeding a water-wheel for the bellows, was heightened, a second bloom hearth was built and a trip hammer driven by the wheel was made for the string hearth. This new forge produced 16 cwts. of iron in a week and used 8 fothers of ore of 24 cwts. each. For some time the ironworks produced about 45 tons of iron a year. To supply this improved ironworks with charcoal, the practice of coppicing was applied—twenty plots of woodland were marked out, each capable of supplying charcoal for one year, so that a constant succession of twenty-year regrowth wood was available. This is a very early example of this practice.

In 1576 the ironworks were renewed with the building of the first blast furnace in Yorkshire. It was on the Abbey site, near the reredorter where great quantities of iron slags have been found. The furnace produced nearly 100 tons of iron a year, which of course would be pig-iron. This was made into wrought iron in the forge which was a short

way down the river (SE 577842). In 1610 a new forge was built and some repairs made to the furnace from time to time so that by 1624 the output had reached 280 tons of iron a year. This furnace and forges continued in production until 1647.

In 1745 ironstone nodules, which were found to be abundant on the foreshore, were gathered at Robin Hood's Bay and sent by coastal boats to Whitehall Furnace on the Wear near Chester-le-Street, a furnace which produced about 25 tons of iron a week. In 1800 the Tyne Iron Company with furnaces at Lemmington-on-Tyne was taking ironstone nodules from the shore at Scarborough and Saltburn, but between 1815 and 1820 they began tearing and digging up the ironstone from the beds which outcropped on the beaches. In 1836 Mr. Wilson, a partner in the Tyne Iron Company, recognised an outcrop of the ironstone seam, four and a half feet thick, at Grosmont, five miles inland from Whitby. Here a mine was opened and the ore could be got with much less effort. It was sent by rail to the convenient harbour at Whitby, and shipped from there to the Tyne where it was used both at Lemmington and at the Birtley furnaces to the amount of 100,000 tons a year.

The ore worked at Grosmont was a seam which thickened steadily to over fourteen feet thick on the coast at Skinningrove, and at the same time its iron content had increased from 25 per cent. to over 30. Tracing the outcrops of this seam, the great ore field around Guisborough and along the northern flanks of the Cleveland Hills was found, which soon became the main source of ore for the new furnaces erected by Bolcow Vaughan at Middlesborough. By 1860 ore from Cleveland was producing, in various parts of the north of England, a total of over 600,000 tons of iron a year. The mines which produced such a mass of ore have naturally left their mark on the area, but the largest lie just outside the northern boundary of the Park or only just within it to the south of Guisborough. Those within the Park, fortunately, have made little alteration to the scenery in spite of their great output.

Before 1850 the Rosedale ironstone had been re-examined and some of it was taken to Ferryhill, County Durham, to be smelted. The deposits were found to be of magnetic iron ore yielding more than 45 per cent. of iron, and, being very valuable and extensive, they were soon being mined on a large scale for the Tees-side furnaces. We are indebted to this mining for two well-known features, the Rosedale Chimney and the old railway track. The Chimney stands on a prominent hill on the west side of the dale (SE 719949), and was probably connected with roasting and calcining ovens for a first treatment of some of the ore from the mines just to the south-east at SE 730945. The railway track continues from two tramway tracks, one from the East Mines in Rosedale (SE 705988), and another from Blakey Mines on the east side of Farndale

(SE 682975). The Blakey tram track climbs rapidly to Little Blakey on the moor top where the track from Rosedale joins it after having come on the contour round the whole head of Rosedale. From this junction there is a more substantial railway track, which goes along the contour round the head of Farndale, and then north-west to the head of Greenhow Bank and down the western scarp of the hills in a steep slant to join the railway near Battersby. The greater part of the track provides unsurpassed views into Rosedale and Farndale and a magnificent view across the lowland to Stokesley and beyond into the Tees Valley. This track should be preserved and kept in condition as a splendid moorland walk.

MINERAL WORKINGS TODAY

Although the great period of iron and jet mining is now over in the Park area, a new phase of mineral exploitation has opened in forms, some of which at any rate, will not entail any large accumulation of spoil, nor will they be in any way noticeable to the visitor to the Park. In the Whitby area deep borings have been made in recent years in search of possible oil deposits, in the course of which, though disappointed of oil, indications have been noted of rich deposits of potash. These are being exploited by underground solution and pumping to the surface as a potash brine. Of a comparable type of mineral development is the successful boring in the Esk Valley above Sleights which taps large resources of natural gas now being used in the area for domestic heating and lighting.

At Danby in the Esk Valley and at Harwood Dale Moor, deposits of silica sand are quarried, but these will not produce sterile waste heaps, and may well at some future date provide choice reserves for the botanist and nature lover when the spoil is overgrown or planted. On the southern fringe of the Park near Helmsley and Appleton-le-Moors there are now important limestone workings, and some of this creamy coloured stone has been used most effectively in new housing in the area. If the use of this local stone can be encouraged (and with the traditional random walling it is not more expensive than other materials), it can make a great contribution to the problem of new buildings within the Park. It is a traditional material of great value and aesthetic appeal, and the disfigurement that quarries may bring can be reduced or eliminated at a cost that is more than amply repaid by the gain in acceptable architectural features.

At Thornton Dale limestone is worked for stone and also for the much needed crushed limestone for spreading on agricultural land. It must be realised that limestone quarrying for agriculture is a natural

usage of local material, and within the Park it cannot be forbidden; properly managed quarries, carefully sited and treated in places where they will not be an aggressive note in the scene, can contribute to the life and employment of the area in an acceptable way.

With an increase in building on the fringes of the Park there is an ever increasing demand for sand and gravel, and glacial deposits on the edge of the Park in the Vale of York are meeting some of this demand. There are sand and gravel pits near West Ayton, but like all mineral workings within the Park, they come under very careful regulation both in their placing and in their appearance.

PLATE XXII. Head of Rosedale, showing typical cultivation pattern of the Dales

PLATE XXIII. Newton Dale and Levisham Station. 'Intake' on the valley bench

PLATE XXIV. Going to the Sale—Darnholm near Goathland

PLATE XXV. Afforestation on the slopes of the Tabular Hills at Bickley, Langdale Forest

7

The Story of Land-Use

by S. R. EYRE

THE HISTORY OF THE LAND-USE PATTERN

FARMERS in this area have been cultivating patches of land around their villages and homesteads for a thousand years and more. In the dales and along the gently sloping lands on the Corallian Limestone along the southern fringes of the Park there must therefore be quite large areas which, for many centuries, have been used almost continuously for growing crops. These cultivated lands began as clearings made in a continuous forest cover, many of them, particularly in the south, almost certainly pre-dating the coming of the Anglo-Saxons. Even by 1086, however, it is quite clear that vast areas of forest remained around these cultivated lands; even on those hilltops and plateaux which today are windswept moorlands, there was, almost certainly, a substantial covering of trees. It was into these forests and woodlands that the mediaeval farmers drove their pigs, cattle and goats to forage. The pigs ate the acorns and grubbed for roots; the cattle grazed on the woodland herbs and the leaves of trees; the goats devoured almost any green shoots, leaves or twigs that they could find, no matter how thorny, tough and unpalatable. Apart from this the farmers themselves used the forest trees for building material, for implements and for fuel. It is small wonder that, as a consequence of this treatment, the forests had, in great part, disappeared by the end of mediaeval times and had been replaced by rough grasslands and moors. On these great commons the farmers continued to pasture their animals. Pigs and goats became less important but cattle were still kept in large numbers and, when the forests and the wolves had been reduced, huge flocks of sheep were introduced. It was at this stage that the flocks and herds of monastic houses like the Cistercian foundation at Rievaulx became important.

Rambling along the lanes and paths around the North York Moors today, one can speculate on the extent and the limits of the late mediaeval cultivation and common grazing land. Unfortunately, though documentary evidence often gives a fairly good general impression of the amounts of cultivated land in individual townships at particular dates, it rarely tells us exactly where all these lands lay. Frequently, however, there is a good deal of evidence actually surviving on the landscape. Nearly all mediaeval cultivation took place in narrow strips in

communal open-fields and, since the populations were much larger on the southern flank of the North York Moors than in the dales themselves, the most extensive open-fields were to be found along this strip following the outcrop of the Corallian Limestone. During the sixteenth, seventeenth and eighteenth centuries, these open-fields were gradually split up and enclosed by fences into separate, privately-owned fields. This was effected by the individual farmers exchanging or buying strips until ownership in more compact blocks was attained. Fences were then made around these compact blocks, and, from then on, communal rights could be extinguished and the farmer could use the field in whatever way he chose. This method of enclosure actually preserved the form of the ancient plough strips and, since most of these had a most characteristic shape, the present-day field boundaries stand as sure evidence of the former open-field status of the land they enclose (Fig. 3). Literally hundreds of fields in the area between Helmsley and Thornton Dale have this characteristic reversed-S shape and it is noteworthy that they

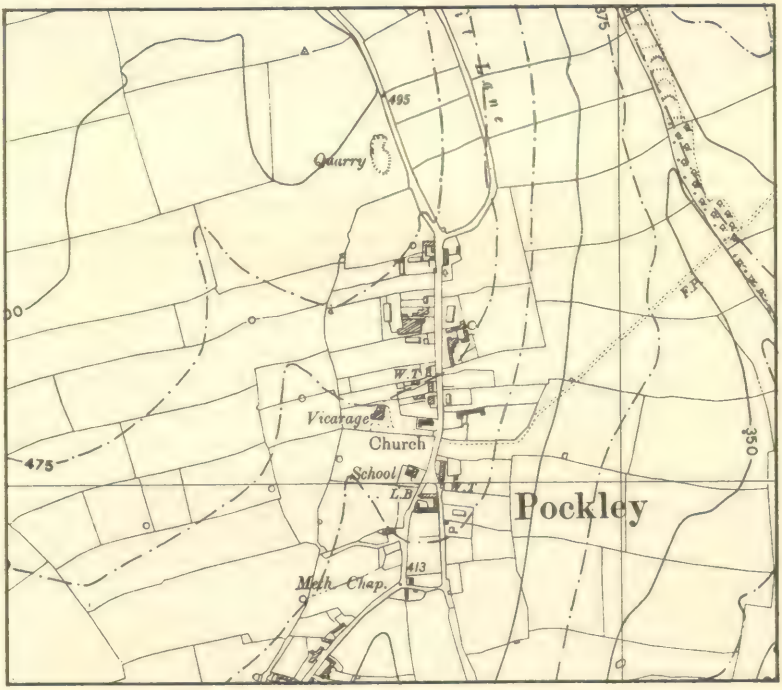


Fig. 3. Fields around Pockley Village.

contain the richest land; here is land that has been recognised for many centuries as innately fertile. Much of this rich land has been left just

outside the boundary of the Park but some of the former open-fields of, for instance, Helmsley, Pockley and Thornton Dale, enclosed in this way, are within the boundaries.

There are no obvious counterparts of these curved, strip fields in the dales. What open-fields there may have been would, of course, be smaller and more irregular in form because of the more broken and steeper relief. For various reasons enclosure would also probably have taken place here at an earlier date so that there has been a greater length of time for decay and modification of the fences to take place. However there are small groups of fields around Cross Holme and Thornhill in Bilsdale and around Low Mill in Farndale which, quite clearly have the characteristic shape of field boundary.

It must be remembered however that considerable areas of former open-fields were not enclosed in the manner indicated above. In some townships the open-fields survived enclosure until the late eighteenth and early nineteenth centuries. At this late stage they were finally parcelled up and enclosed by means of an act of Parliament and the resulting field pattern bore little or no relation to the form of the pre-existing strips. The open-fields of Lastingham were enclosed in this manner in 1788.

Some of the great common grazing lands were similarly enclosed by Act of Parliament, particularly those in the south on the higher hills of Corallian Limestone and the lower slopes of the sandstones. These areas which had been grazed in common ever since mediaeval times were accurately surveyed and split up into regular, straight-sided fields, each farmer in the township receiving an area commensurate with the number of animals he had formerly had the right to graze on the common. The roads across these enclosed commons were also regularised and came to run in absolutely straight lines. They were also made a constant width throughout their length (Fig. 4). The common moors of Cold Kirby (1768), Hartoft (1769), Pickering and Newton (1789) and Beadlam (1819) were enclosed in this way.

It is interesting to note that, whereas the former areas of extensive open-field were mainly left outside the southern boundary of the Park, most of the areas of enclosed common grazing land are included within it. Even those better parts of the common grazings which were intensively enclosed for agricultural purposes had, generally speaking, poorer, thinner soils than the areas of former open-field. The poorest land of all in the enclosed townships was usually allotted to the lord of the manor or to a big landowner and was used as grouse moor. Subsequently much of this was used for forestry. The large plantations in Cropton and Ampleforth were made on the former common moors oe these two townships. On the other hand most of the townships in thf

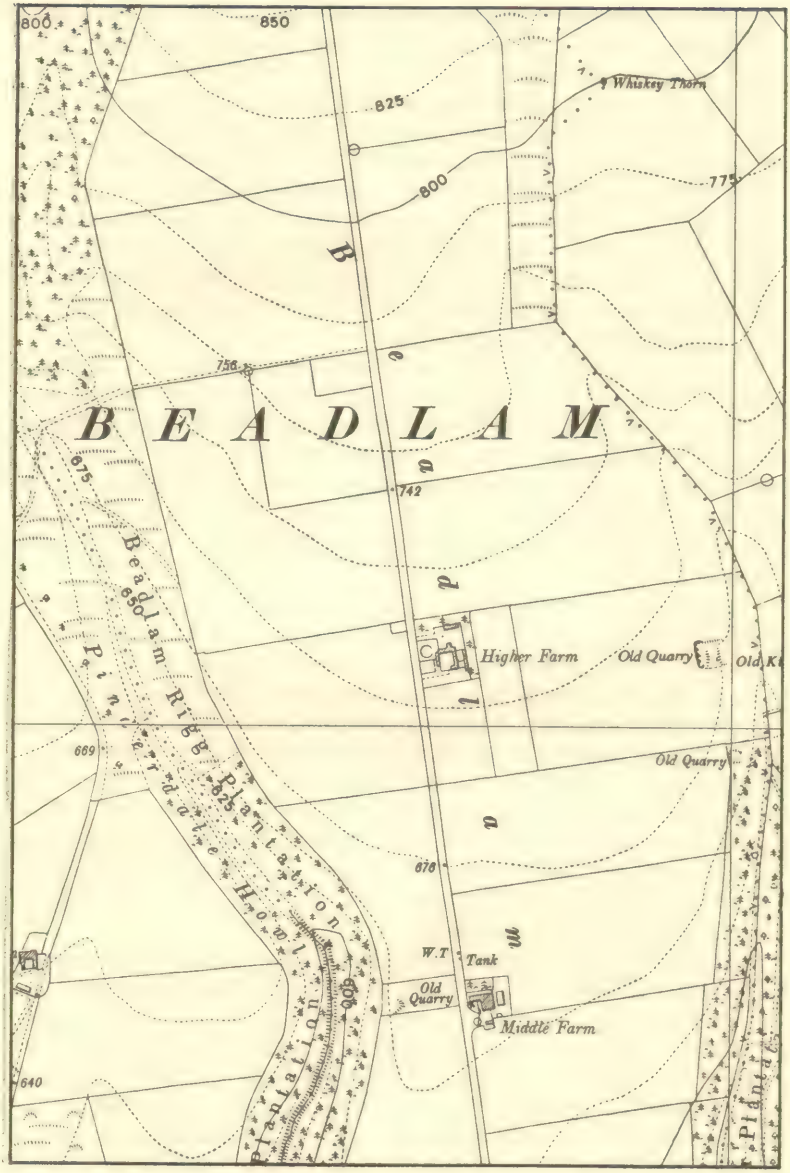


Fig. 4. Fields on Beadlam Rigg.

dales never had their commons enclosed. The moors flanking Bilsdale, Farndale, Bransdale and Rosedale are still technically commons.

FARMING TODAY

The present field-pattern and the present vegetation of the moorlands are the legacy of past centuries. They are the framework in which present farming activities are carried on. Today, the great contrast in land-use between the dales and the southern fringe is still apparent. An almost continuous belt of arable land stretches from Helmsley to Thornton Dale, broken only where steep-sided, wooded valleys cut across the gently-sloping table-land from north to south. On this arable land rotations approximating more or less to the normal four-course rotation of the English lowlands are practised; there is however a considerable emphasis on cereal production. Here barley and oats are of almost equal importance and wheat also features prominently in the rotations. Furthermore, mangolds and even some sugar beet are grown as well as turnips and swedes. There is very little land beneath permanent grass and even the temporary grass is limited mainly to one year leys. Both milk and beef production are important, the animals being grazed on the leys in summer and fed on clover hay and roots in the winter. Large numbers of sheep are also reared and fattened, these being folded near the farms on the turnips and swedes in the winter. Even to the west of Helmsley, where the limestone rises to much greater heights, this relatively rich agriculture persists and above Old Byland, Cold Kirby and Scawton, within the south-western corner of the Park, cereal production persists right up to the thousand foot contour.

The dales of the North York Moors present a most unusual land-use picture. On the one hand the farming economy here is very different from that to the south and, on the other, it is different from its counterpart in the dales of the Yorkshire Pennines. The long views of Bilsdale from the top of Newgate Bank and of Rosedale from Rosedale Chimney reveal a landscape composed of a patchwork of grassland and cropland. This is very different from the landscape of upper Wensleydale and upper Wharfedale where an almost unbroken grassy sward extends along the valley sides. Today, in Bilsdale, many of the farms—even the uppermost ones—have no more than a quarter of their enclosed land beneath permanent grass. Large areas of land are used for oats, swedes and turnips with subsidiary potatoes. Negligible quantities of barley and wheat are produced however and mangolds are rarely seen. The sharp increase in mean annual precipitation and cloudiness as one passes northwards from the Helmsley-Pickering zone must be an important factor so far as cereal ripening is concerned. Whereas much of the dales has a precipitation exceeding 35 inches much of the northern fringe of the Vale of Pickering has no more than 25 inches. Also, apart from the soils in the dales being much more leached and acid than those on

the limestone, they are also much more shallow. This is probably the main reason for the near absence of mangolds.

The present cultivation policy of the dales' farmers is to 'take the plough around the farm' very regularly. A five to seven year rotation is commonly practised with two or three years of oats and roots followed by three or four years continuously under grass. All farmers have a very flexible policy however and plough up their leys only when they become too poor and weedy.

Great changes in animal husbandry have taken place in the dales during the past 30 years. Formerly sheep farming and cattle rearing were the mainstay of the farm economy. Large flocks of sheep are still kept with Swaledales as the predominant breed. Scottish blackface sheep are also important locally, especially in the Castleton area, but the earlier practice of crossing with lowland breeds like Leicesters and Oxfords, in order to produce heavier lambs, is now decreasing in importance. The smaller upland sheep from which smaller cuts can be obtained are now much more in demand. It is the uppermost farms, those whose lands lie next to the moorland edge, which have the majority of the sheep today. These are grazed on the leys and fed on roots in the winter but are turned on to the commons during the summer. These common grazings are of relatively poor quality, however, at best having a cover dominated by heather. This has a stock-carrying capacity far below that of many of the grass moors of the Pennine dales. Furthermore the value of the North York Moors rough grazing land has been even further reduced in recent decades by careless, accidental burning. In the dry summer of 1959 in particular, hundreds of acres were burned so drastically that the whole of the vegetation and the underlying peat were completely destroyed leaving a rocky or gravelly desert on which a cover will be re-established only after a number of years. Indeed there can be little doubt that the scenic value as well as the grazing value of these areas will be progressively reduced unless these destructive fires can be prevented. Fortunately for farming there is no longer any pressing need for the forage on these commons; although most of the farmers in the dales still have legal grazing rights and access to the commons, very few indeed now take advantage of them.

It is on the farms lower down the valley sides and in the valley bottoms that the greatest changes have taken place. The mainstay of their economy is now milk production and large herds of Friesians and Shorthorns can be seen grazing along the hillside fields throughout the summer months. Several factors have been responsible for this sweeping change. The setting up of the Milk Marketing Board in the 1930's provided a stable, guaranteed market; the growth of road transport and the improvement of farm roads permitted rapid transport of the milk

to the depot and the consumer; the extension of the electricity grid and diesel generation to quite remote farms enabled the use of milking machines. Along with this, egg production doubled or trebled between 1945 and 1960. Based on this great boom in dairy production, the lives of the farming communities in these dales have been transformed in two decades; families on remote farms with their own motor cars, surfaced roads and electrical appliances no longer feel remote.

Many parts of these dales now have a relatively thriving agriculture where depopulation and the reversion of agricultural land to bracken and heather are by no means such a threat as on many British uplands. In many places land is ploughed regularly right up to the moorland edge often above 800 feet above sea-level. If this is not done the land reverts very quickly; indeed this has occurred locally. Because of this danger of reversion, it is quite clear that the stock-carrying capacity of these dales would fall very rapidly if the policy of frequent ploughing were relaxed. In this respect the dales of the North York Moors, formed as they are of sandstones, are different from the limestone grasslands of Upper Wharfedale and Wensleydale. Furthermore, whereas the Millstone Grit areas of the Yorkshire Pennines have suffered wholesale dereliction of land because of the acquisitiveness and the policies of water boards, no such misfortune has overtaken the dales of the North York Moors. Also, being further away from large centres of population, there has been much less temptation for the farming population here to abandon their more orthodox pursuits in order to set up catering establishments for weekend trippers. Forestry developments have disrupted the farming economy much less here than on many British uplands. As a consequence of all these pieces of good fortune, farming remains a 'going concern' in much of this National Park; indeed much of its charm depends upon the fact that the farming communities are here carrying on their industry in an unselfconscious way. Farmers, many of whom have descended from generations of North Riding farmers, are here using the landscape profitably but, at the same time, preserving its essential characteristics and beauties. The establishment of the National Park should encourage them to continue to do so.

FORESTRY AS LAND-USAGE

When one recollects that quite thick forest formerly covered nearly all of this National Park, it is very surprising that today only about one-eighth of the total area, less than 50,000 acres, is covered with trees. Indeed, until 1921 when the Forestry Commission began planting here, there was little more than 10,000 acres and much of this was around the periphery or concentrated in the Esk Valley. Many of these older,

privately-owned woodlands were on steeply-sloping land which it was undesirable to use for cultivation; they comprised stands of oak, beech and other deciduous, broad-leaved trees as well as conifers.

Much of the 40,000 acres now owned or leased by the Forestry Commission is on the higher, more level plateau surfaces. About 35,000 acres of this have been planted. Most of this newly-made forest is composed of conifers since a commercial crop of timber from hardwoods such as oak could not possibly be obtained from these poorer soils. Even for conifers it is necessary to employ deep ploughing methods in order to break up the ferruginous hard-pan that has developed in many places in the acid conditions beneath the heather and the moorland grasses. When this has been done, however, quite a variety of different species of conifer can maintain a fair rate of growth. Scots pine is the most extensively planted tree, but introduced species such as the North American Sitka spruce, Lodgepole pine, Douglas fir and hemlock along with the Norway spruce, Corsican pine and Japanese larch from Eurasia are all grown successfully on different types of site.

To a forester the threat of fire is a recurrent nightmare. Particularly in the early stages of growth, before the young trees have effectively smothered combustible plants such as heather and bracken, plantations are extremely susceptible to destruction. For this reason it is highly desirable to curtail access to newly forested areas; the carelessly deposited match or cigarette can, in a single hour, destroy the product of years of work. When once the plantations are well established however, restrictions can be relaxed and holiday-makers can wander through pleasant forest rides which might very well never have survived but for earlier precautions.

Indeed, the time may have come when those who enjoy a rich and varied landscape should welcome temporary limitations of access. The blackened and devastated areas which appear on our wild heaths and moorlands whenever a dry season occurs, and which may remain as unsightly scars on the landscape for long afterwards, can probably only be avoided if visitors are temporarily required to limit their rambles and if larger areas are put into the care of conserving custodians.

8

The Work of the National Park Authority

by S. LEE VINCENT

THE principal objects of designating an area as a National Park are the preservation and enhancement of the natural beauty of the area and the promotion of the enjoyment of the area by the public. The authority responsible for achieving these objects in the North York Moors National Park is the North Riding of Yorkshire County Council—the existing local planning authority before the National Park was designated. The County Council set up a separate committee to which it delegated the new National Park powers and also its powers under the Town and Country Planning Acts so far as the area of the National Park is concerned. This committee, the North York Moors National Park Planning Committee, is composed of 18 members, 12 being County Councillors and 6 not members of the County Council, being nominated by the Minister of Land and Natural Resources on the recommendation of the National Parks Commission.

For the first of their principal functions—the preservation and enhancement of the natural beauty of the area—the Committee rely chiefly on the normal planning powers which the County Council as local planning authority had been exercising before the area became a National Park. The system of control over development by Area Sub-Committees of the County Planning Committee has continued to operate, the only differences being that the Area Sub-Committees' powers are derived now by delegation jointly from the County Planning Committee and the National Park Committee, and that the Area Sub-Committees, as well as having representatives from the County Council and the District Councils whose areas are affected, each include one or more of the Minister's nominated members of the National Park Committee.

In administering control over new development the general policy is to limit this to what is essential to the normal life of the area, to prevent unnecessary and incongruous development and to ensure that what buildings are erected are suitably placed and in keeping with the existing scene. For the most part new building development is guided to existing settlements, and isolated buildings in the open countryside are avoided as far as possible. The small towns and most of the larger villages of the

North York Moors region, in which most of the new development of the region is normally needed, are just outside the National Park boundaries and so this policy can be applied without being unreasonably restrictive.

When considering the details of new building proposals special regard is paid to siting and to design and materials. This is perhaps the most important aspect of planning control in areas of fine landscape. A building of alien design and materials can upset the harmony and settled appearance of a village scene, and in the countryside it can affect the character of a considerable area around it, especially if it is on a conspicuous site. In the open country good siting is therefore of great importance. Strict adherence to established traditional design and materials is not always easy to achieve, bearing in mind that the local inhabitants must not be denied the advantages of modern house design and that to repeat the traditional materials may involve high cost. For these reasons departures from tradition sometimes must be accepted, but even so it is usually possible, with care in adaptation of design and selection of materials, to produce buildings which are not discordant in their setting.

The work of the National Park authority, and indeed also the efforts of many private individuals to build in keeping with the locality, is offset to some extent by the freedom from planning control afforded to certain types of development by the General Development Order. The intention of this Order was to obviate the necessity of obtaining formal planning permission for developments which were considered to be either of such minor importance, or so essential, that the formal procedure would be superfluous. This freedom extends to most non-habitable agricultural buildings on *bona-fide* farms or smallholdings, and only buildings above a certain size—such as large broiler houses and silos—and buildings close to classified main roads, or buildings not originally designed for agriculture, for example old nissen huts, are excluded from the concession. The exemption from control also embraces small private garages and outhouses in the grounds of dwellings, and changes in the appearance of houses such as new styles of windows, different roofing tiles, and colouring of external walls. These things can affect adversly a rural scene and it is unfortunate that they cannot be controlled, particularly in areas such as National Parks which need special protection from disfigurement. Fortunately, the majority of people who live in National Parks are anxious to preserve the beauty of their neighbourhood and the effects of the 'freedom' are not as serious as they could be. The Minister of Housing and Local Government has called the attention of agricultural bodies to the desirability of farmers consulting the local planning authorities before erecting new farm buildings, and it is hoped that this will result in an improvement in the appearance of buildings.

Apart from buildings, there are other forms of development whose effect on the rural scene can be disturbing. Overhead electricity lines are ugly in almost any situation, urban or rural, and they can be most disfiguring in the countryside. The main grid lines with their tall pylons are happily relatively few. In the North York Moors region there is only one such line passing through the National Park, across the moors between Pickering and Whitby, whilst a double line skirts the western edge of the Park along the foot of the Hambleton Hills. The secondary transmission lines—the cross-country distribution lines—are more numerous, but with their single poles and light sectioned wires these are capable of being absorbed into the landscape to a large extent if carefully planned; and in this the electricity authorities have shown themselves to be ready to go a long way to meet the National Park authority's wishes. The same can be said for the Post Office in respect of their telephone lines. The village electricity networks are the most obtrusive and the most difficult to conceal, but much can be done, and is done, to reduce their adverse effects by discreet positioning of poles and in many cases placing the lines along the backs of houses instead of through the village street and on village greens. The ideal is to have all electricity lines underground and the Electricity Board sometimes do this in special cases, but the greatly increased cost rules this out as a general practice at present; although the Post Office have placed underground many of their lines in recent years, their lines apparently being able to be so treated at much less cost than electricity supply lines.

Caravans are a cause of disfigurement in the countryside, and National Parks are particularly vulnerable to this form of development. The Caravan Sites and Control of Development Act, 1960, however, places strong powers in the hands of the National Park authority and the District Councils, who acting jointly are now in a position not only to control the location and size of new sites but to impose conditions to improve, and to close any existing sites which are objectionable. In the North York Moors, the authorities, in addition to exercising firm control, have taken a positive course—in view of the demand for caravan holidays—by agreeing to the continuing use of certain sites and the establishing of new ones on or near the coast, where the demand is the greatest; feeling that by helping the demand to be satisfied in this manner there is all the stronger justification for taking a firm restrictive attitude elsewhere.

Surface mineral workings are developments over which the planning authority exercise close control and a number occur in the North York Moors. They produce obvious scars on the landscape but, although in some places their prohibition may be justified, they supply an essential need and provide employment and are part of the economic life of the

area. The policy therefore is not so much to seek to prevent them as to permit them subject to stringent conditions requiring orderly working and restoration after working has ceased.

Outdoor advertising, a source of particularly bad disfigurement, is controllable under the Advertisements Regulations, which have enabled the whole of the North York Moors to be placed in what is termed an 'area of special control', within which the planning authority must limit outdoor advertisements to no more than are necessary for information, direction and convenience. Outdoor advertising has been strictly regulated in the North Riding for the past thirty years and the whole county is remarkably free from it.

Another source of disfigurement, not however so easily controlled, is litter. The 1958 Litter Act has greatly strengthened the hands of the authorities, but obviously its direct application is only possible when offenders can be caught in the act. With the stiffer penalties now enforceable however, cases which are reported and proved, and the publicity given to them, have a strong deterrent effect, as also have the activities of National Park Wardens and the excellent work of the voluntary warden service and that of the Council for the Preservation of Rural England, whose co-operation with the National Park authority is of great value in preserving the beauty and tidiness of the Park.

The Committee have appointed an official full-time warden, whose duties, apart from guiding and advising visitors, include the general supervision of the National Park area, paying special regard to the avoidance of litter, prevention of fire, and other aspects of public behaviour; and the co-ordination of the voluntary wardens' activities.

For the protection of the flora of the National Park there are the wild flower by-laws, which apply to the greater part of the county, making it an offence to uproot wild flowers. Special protection is afforded to Farndale, a beautiful dale celebrated for its wild daffodils, by its having been declared a Local Nature Reserve which has enabled a special by-law to be made prohibiting even the plucking of a daffodil; and this, together with the good work of voluntary wardens, does much to preserve the striking beauty of this dale in the springtime.

The National Park authority's efforts to preserve the appearance of the wilder parts of the Park are prejudiced by the activities of Government Departments in meeting certain national needs, often in conflict with the objects for which the Parks were designated. The former use for military training purposes of a large area of Fylingdales Moor in the eastern part of the Park, has resulted in a large area being left unsafe to walk across because of the possible existence—despite intensive clearing operations—of unexploded missiles remaining from battle training. In one part of the area it has been necessary to site a large

radar station for defence purposes, and whilst it has been possible, fortunately, to obtain the co-operation of the Air Ministry (now Ministry of Defence (Air)) in reducing its effect to the minimum by reason of careful siting and choice of building materials, such an intrusion cannot fail to be an eyesore which will remain for many years.

Another activity by a Government Department which produces substantial changes in the character of the landscape, is afforestation. This does not come within the definition of 'development' under the Town and Country Planning Acts, and the National Park authority have no right of control over it, whether it be by the Forestry Commission or a private landowner. It causes the Committee much concern since the character of the North York Moors depends largely upon the retention of extensive areas of open moorland, and the covering of too much of this with forest would change this character and seriously detract from its beauty. It is in the economic interest of the nation to produce more timber, and it is inevitable that many of our national forests should be in National Parks. If the characteristic beauty of the area is to be maintained, however, the forests must be kept in proportion to other land uses, and the National Parks Commission and the Committee strive to achieve this. The Forestry Commission consult the National Parks Commission and the Committee on all major planting proposals and are most co-operative in acting upon their recommendations, shaping plantations to fit the natural configuration of the land, leaving clear prominent features and popular viewpoints, and planting with varying species including a proportion of hardwoods. In judging proposals the Committee do not overlook the fact that planting in scale with the landscape can enhance its beauty and sometimes creates new landscapes which are beautiful in themselves.

The second principal function of the National Park authority requires them to survey the Park to decide what needs to be done in providing or improving facilities for the enjoyment of the public. What has been done so far has been modest, because the early years of the Park were years in which it was necessary to keep a close watch on expenditure. The Park authority, however, have provided a number of car parks from which attractive views may be enjoyed, or from which expeditions on foot may be made into more remote places; in conjunction with the National Parks Commission a long distance footpath has been planned which will pass up the coast from a point near Filey to Saltburn and then along the northern and western edges of the Park before turning east to end at Helmsley; and in co-operation with the Youth Hostels Association a new purpose-built hostel was opened in 1964 at Helmsley.

In carrying out their responsibilities, the National Park authority are conscious of the importance of regarding the Park not as a museum piece to be preserved just as it is at all costs, but as a part of the countryside which though of outstanding beauty is a place in which people live and work, and upon which many people living in other parts depend for much of their food supply. Building development and other changes in appearance of the landscape are inevitable and it would be wrong to seek to prevent them, and it must be realised that to a large degree what is so much admired now is the result of continuous changes at the hands of nature and man over many centuries.

The Park authority also are mindful that the two main functions of National Parks—preservation and public enjoyment—can be frequently in conflict. The public, by unreasonable—even if unintentional—behaviour, may not only damage the farming economy of the area but also the very thing which they have come to enjoy. It is perhaps in reconciling these often opposing interests that the National Park authority's work may prove the most valuable.

9

Places of Special Interest

by THE EDITOR

AIRY HOLME FARM. Near (south of) Roseberry Topping, where Captain James Cook spent part of his boyhood when his father worked on the farm.

AMPLEFORTH. A long street village, just outside the National Park, at the foot of the Hambleton Hills. The church of St. Hilda, largely rebuilt, has some fine Norman arches. Three-quarters of a mile from the village is the modern Benedictine Abbey of St. Lawrence, founded in 1802 by refugees from France. The boarding school attached to the Abbey has a fine library. The monastic church is still being built. The moors to the north have several Bronze Age barrows, recently excavated, and the earthwork, Studford Ring.

APPLETON-le-MOORS. Near Kirkbymoorside, a long one-street village of good traditional houses (Plate XVII). It has a fine Gothic church designed by J. Pearson R.A. in 1865, and a mediaeval wayside cross.

ARNCLIFFE HALL. At the north-west corner of the Cleveland Hills. A fine Georgian mansion by Carr of York, 1754, seat of the ancient family of Mauleverer. Above Arncliffe Wood is the site of a mediaeval beacon and of a modern Repeater Television Booster Station.

AYTON EAST and WEST. Twin villages separated by the river Derwent, on the main Pickering to Scarborough road. East Ayton has a very charming church, much of it of the thirteenth century; West Ayton has the remains of a fourteenth century fortified tower. The villages are at the entrance to the lovely Forge Valley.

BAYSDALE. A lonely secluded valley near Battersby. Baysdale Abbey Farm is on the site of a Cistercian nunnery founded in the twelfth century. Small mediaeval ribbed bridge and a few sculptured stones are what remain from the early period, set in a beautiful situation.

BILSDALE. A splendid valley down which runs the main road from Stokesley to Helmsley and along which there is a daily bus service. Bilsdale joins Ryedale near Hawnby and the road further

along passes close to Rievaulx Abbey. Bilsdale bisects an area rich in prehistoric remains—the earthwork of Urra Moor runs on the eastern crest of the valley for three miles. From Chop Gate there is excellent to severe walking on Snilesworth and Bransdale Moors. The centre of Bilsdale is Chop Gate or Yat with smaller communities at Urra and Fangdale Beck. George Villiers, 2nd Duke of Buckingham of Helmsley Castle, founded the Bilsdale Hounds in the seventeenth century and met his death at the Buckingham Stone in Tarn Hole.

BOULBY CLIFF. The northernmost corner of the Park. A line of cliffs which reach 660 feet high, the highest in England, scarred by old alum quarries (see page 57). A good range of cliff and coast scenery to Staithes, two miles to the east.

BRANSDALE. A remote valley watered by the Hodge Beck. The Lodge is a Georgian shooting box belonging to Lord Feversham, and close by there is a small chapel-of-ease of mediaeval date.

BRIDESTONES. On the east side of Dovedale Griff near the corner of Staindale Forest. A group of naturally weathered rocks of fantastic shapes, eroded from the Corallian limestone, and now the property of the National Trust. Three quarters of a mile north-east is Thompson's Rigg with a large group of cairns and tumuli of Bronze Age (see page 34).

BYLAND ABBEY. One of the most beautiful monastic ruins in the north. A Cistercian abbey settled from Furness via Old Byland, in 1177. Considerable remains of the church and the conventual buildings of late twelfth and early thirteenth century, show some fine tiled floors in geometric and coloured patterns, all well preserved. The church and cloister are larger than those of either Fountains or Rievaulx. The west end of the church has the remains of a wheel window 26 feet in diameter. The ruins are in the care of the Ministry of Public Building and Works and are open to the public.

CARLTON (IN CLEVELAND). A charming village at the foot of the Cleveland Hills, with a handsome modern church (Temple Moore) and an eighteenth century Manor House. On Carlton Bank there are the remains of extensive alum works closed in 1771, also the site of the Newcastle Gliding Club hangar.

CASTLETON. A village in Eskdale, the site of a castle built by de Brus in or about 1089 as head of the Lordship of Danby Forest. Nothing remains to be seen now except the motte cut into by the modern road. There is a splendid road south along the summit of Castleton Rigg, to Ralph Crosses and White Cross and so to Rosedale. The moors round about are rich in prehistoric remains.

PLATE XXVI. Bank Side, Kildale, a typical farm group developed from the 'Long House'

PLATE XXVII. Robin Hood's Bay

The church is modern with some very fine oak fittings by Thompson of Kilburn.

CAWTHORNE CAMPS. Roman camps—see page 37 for description.

CHURCH HOUSES. A hamlet in Farndale at the foot of Blakey Bank, with an inn and church. The Old Vicarage is now the Youth Hostel.

COMMONDALE. At the crossing of many ancient tracks such as the Monks' Causeway from Whitby Abbey to Guisborough Priory, and the road from Sandsend and Runswick, formerly the main road through Cleveland via White Cross. A good walking centre.

COXWOLD. A village in a beautiful setting between the Hambleton Hills and Hawardian Hills at the west entrance to the Vale of Pickering. Many interesting buildings surround the main street; a grammar school of 1603, some Stuart alms houses, Colville Hall, and others. The home of Laurence Sterne whose house Shandy Hall is very attractive. The fifteenth century church with an octagonal tower has many features of interest, old glass, and the Belasyse tombs. Half a mile to the south-east is Newburgh Priory largely built from the Priory remains by the Belasyse family. It is the reputed burial place of Oliver Cromwell. The Priory was a house of Augustinian Canons, founded in 1145.

CROPTON. On the border of the Park 4 miles north-west of Pickering. A pleasant village with a castle mound on the west and within the Park boundary. At Domesday Survey this was a royal manor, but was granted to Robert de Stuteville who built the castle, probably of timber. Well situated on the extreme point of a promontory giving a wide view over Rosedale, it was an excellent position for defence. The modern church just east of the mound is built on the site of the castle chapel. The motte is about 150 feet diameter and the bailey covers over three acres. Parts of the ramparts and ditch are in good preservation. A half timber manor house was built within the bailey about A.D. 1200 from which the mounds got their name of "T'Hall Garths".

CRUNKLY GILL. A deep and narrow gorge through which the river Esk now runs, near Lealholm, a diversion caused during the Ice Age when the old channel of the river was blocked.

DANBY. A fine centre for the exploration of upper Eskdale. Danby Beacon is on the moors one and a half miles to the north-east, and Danby Dale, rich in Quaker history, runs to the south and leads into Danby High Moor. The remains of Danby Castle, an early fourteenth century palace-fortress of the Latimers, are a mile south-east of the village, and on Danby Rigg within quarter of a mile, there is one of the largest aggregations of cairns of

probably Bronze Age (see page 34). Danby was the home of the author Canon Atkinson, its vicar for 53 years, whose *Forty Years in a Moorland Parish* is a classic. The village is known as Danby End and a part of it as Ainthorpe. Danby church down the dale and away from the village, is an interesting structure with work from many centuries.

EASBY MOOR. Bears Captain Cook's monument, a tall stone obelisk erected in 1827, behind which are picturesque rocks and ancient embankments. Easby Hall, the ancient seat of the Eures is mediaeval redressed as Georgian. Castle Hill is an ancient motte.

EASINGTON. On the coast, has a handsome Victorian church with many Norman carvings in it, and a moated domestic site nearby. In the parish of Easington there are many lovely wooded valleys and fine cliff scenery at Boulby Cliffs.

EGTON. A large upland village on the north bank of the Esk, formerly famous for its markets and fairs and now for its gooseberry show. The church is Victorian, but there are remains of the old church at some distance from the village. The district was a stronghold of Roman Catholicism, made famous by Father Postgate who ministered here until his execution at the age of 83 in 1679.

ELLERBURN. A mile up the valley of Dalby Beck from Thornton Dale, it has an early church with some interesting woodwork, a wheel-head cross of the tenth century and a crucifix cross of the eleventh century, which survive from the original pre-Conquest church.

ESKDALESIDE. The old name for the parish of Sleights, near which village, south of the Esk, there are the slight remains of an ancient chapel.

FACEBY. A charming little village of Danish origin, at the foot of the curious Whorl Hill. The church is Victorian, but has in it some fragments of Norman workmanship.

FARNDALE. The valley of the river Dove, approached best from Gillamoor and Kirkbymoorside, or from Hutton-le-Hole. A good road up each side of the dale make a circular route possible. Famous for its spread of wild daffodils, which after years of heavy plundering are now protected, since part of the valley is a Local Nature Reserve (Plate XI). There are several old farms and some mediaeval 'cruck' and thatched houses.

FOSS CASTLE. On the Mickleby Beck two and a half miles from the coast at Sandsend. Beautifully situated above a wooded ravine, a circular motte, 120 feet diameter, stands 100 feet above the beck. Surrounded by a ditch except where the precipice on the south drops 80 feet to the beck. A small bailey adjoins on the south side.

There are now no traces of buildings. A very early wooden castle, built in 1071, was abandoned in 1197 for Mulgrave Castle, half a mile to the east.

FRYUP, GREAT and LITTLE. Two romantic valleys branching south from Eskdale. Fryup Head has some good rock scrambles.

FYLINGDALES MOOR. To the west of Robin Hood's Bay, is a large expanse of wild country and lonely moorland. Now part is lost to the public by the incursion of a Ballistic Missile Early Warning Station, set up jointly by the British and United States Governments. This is deeply regretted by all who love the moorlands of the Park.

FYLING THORPE. The upper residential area of Robin Hood's Bay, the lower part near the sea being generally known as 'Bay Town'. On the road to Boggle Hole Youth Hostel, Fyling Old Hall is an interesting seventeenth century house built by the Cholmleys of Whitby Abbey.

GILLAMOOR. This hilltop village has near it a 'surprise view' of great beauty across Farndale and the wide stretch of moors beyond. There is a unique roadside sundial, and the little church was built in 1802, single-handed by one mason.

GLAISDALE. A village on the hill slope at the entry of Glaisdale into Eskdale. Arncliff woods and the banks of the Esk, with the seventeenth century single span Beggar's Bridge, draw many artists and lovers of river scenery to the area. In the mid-nineteenth century there were three blast furnaces at Glaisdale. Near Glaisdale Head there are several curious inscriptions cut about 1700, and carved on gateposts and boundary stones. On Glaisdale Rigg there are many old dated guideposts.

GOATHLAND. (Plate III). A village set round an enlarged village green, almost a common, with the modern church at one end and Darnholme at the other. Set in the midst of some of the finest heather moors rich in all kinds of interests. In the village of Goathland the Plough Stotts, sword dancers, have been revived after a short lapse, and now perform a big suite of traditional dances. Goathland is a good walking centre, near the line of the Roman road, and only nine miles from Whitby. It is a very popular holiday centre.

GROSMONT. In Eskdale, a former centre of ironstone working (see page 59). At the entrance to the valley of the Murk Esk. The site of a Grandimontine Priory, about A.D. 1200.

HACKNESS. A village set in a wooded hollow, a favourite short outing from Scarborough. It is near the river Derwent and a centre for a great fan of small dales including the lovely Whisper Dales,

opening from Lowdales Beck and from the Derwent. In A.D. 680 St. Hilda of Whitby sent a group of nuns to settle here but their nunnery was destroyed by the Danes in 869. In the church there is an Anglian cross with inscriptions in Latin and in Runes, made for or by the nuns before the Danish invasion. (Plates XIV & XV). On one side an inscription may be read 'O Aethelburga (?) may thy houses ever be mindful of thee and love thee, most loving mother . . . St. . . . (and . . . ? . . .) Abbess Aethelburga pray ye for us'. The upper part of the shaft has inscriptions on three sides. Hackness Hall is a fine Georgian house by Carr of York: originally the home of Lady Hoby, the first woman diarist.

HAMBLETON ROAD. THE DROVE ROAD. A very ancient, possibly prehistoric green road. South from the crossing of the Tees near Yarm it enters the Park and mounts the Cleveland Hills at Scarth Nick onto Osmotherley Moor, then runs south as a fine ridge road past Solomon's Temple and Slape Stones onto the west flank of Black Hambleton, running for a stretch at above 1,250 feet OD. Continuing across Little Moor by Steeple Cross, High Paradise and Sneck Yate, it reaches Cooper Cross at the head of Sutton Bank. South by Scotch Corner, Oldstead and Coxwold it leaves the Park and continues its long course which has seen the passage of thousands of Scotch cattle to the markets of East Anglia and the South.

HARWOOD DALE. Centre of a wide area of Forestry operations; has a ruined Jacobean chapel built by Sir Thomas and Lady Hoby of Hackness.

HAWNBY. A village in a very beautiful setting in the heart of Ryedale. Arden Hall in woods beyond the secluded church, is mainly a seventeenth-century building on the site of a twelfth-century nunnery. An excellent approach to Hawnby is made by the road across the Hambleton Hills, from Thirsk by way of Boltby, crossing the great Drove Road at Sneck Yate and the Hesketh Dykes.

HAWSKER. An upland village on the A.171 two and a half miles north-west of Robin Hood's Bay. Its church has a fine pre-Conquest cross shaft, which had panels of interlacing knott work and with some bird figures as well. This cross is of tenth century date and the ornament is typical of the Norse tradition.

HELMSLEY. A country market town on the southern border of the Park, well-placed in a nook of the hills. A large market square has many attractive buildings round it, and two crosses, one very old and the other a modern one designed by Sir Gilbert Scott.

North of the square stands the church with a south doorway and chancel arches of Norman work, and near it the Canon Garth, probably a house of the Canons of Kirkham Priory. Helmsley Castle built between 1186 and 1227, is seen in the background, with an imposing keep and a well-preserved sixteenth century part lived in by the second Duke of Buckingham after his disgrace. Much of the older parts of the castle are represented by foundations and remarkable earthworks. It is in the care of the Ministry of Public Building and Works. Duncombe Park adjoining, the family seat of the Earl of Feversham but now used as a girls' school, was reputedly designed by Vanbrugh. Helmsley is the natural calling place on the routes to Scarborough and Whitby and is a fine entry to the Park and for Ryedale.

HOLE OF HORCUM. A great natural hollow in Levisham Moor, floored with green fields, and with two farms, High and Low Horcum. The main road skirts it on the east side and Saltergate is on the moors near the head.

HUTTON-le-HOLE. A straggling village at the foot of Farndale, set round a big green with a stream running through it. The irregular scatter of cottages with well-kept gardens and the many bridges, make a very happy picture, enhanced by distant views of the moors as background. It is an old centre of Quakerism. There are very extensive views across the moors from the road to Gillamoor. Lastingham is two miles to the east and Rosedale is reached by a good road over Spaunton Moor.

INGLEBY GREENHOW. A small village at the foot of the Cleveland Hills. It has a Norman church with much of interest about it. Ingleby Manor is an ancient manor probably of the sixteenth century.

KILBURN. Two miles north of Coxwold at the foot of the Hambleton Hills. On the face of Roulston Scar is the Kilburn White Horse, cut in 1857 by the village schoolmaster and thirty helpers; it is about 314 feet long and 228 feet high and is whitewashed. The village has a stream with little bridges leading to the cottages with many attractive gardens. Robert Thompson the famous worker in oak, using a mouse for his mark on what he made, lived here and his workshops here are still busy.

KILDALE. Five miles out of Stokesley in the Leven Valley. Near the restored church is the moated site of the Percy Manor house. Kildale Castle was founded in the reign of Stephen and finally abandoned in Tudor times. The motte is now occupied by a modern farmstead and a small par. is cut away by the railway. Little now remains. The moors to the north are rich in prehis-

toric interest, and to the south a good track goes over the moors to Baysdale.

KIRKBYMOORSIDE. Outside the Park boundary on the Helmsley to Pickering road, but a very good centre from which to explore Bransdale and Farndale. It is an interesting market town with a few remains of a castle of the Nevilles.

KIRK DALE. Just outside the Park boundary, one and a half miles west of Kirkbymoorside. Site of the famous Kirk Dale Cave (see page 32). The church has a splendid pre-Conquest sundial (Plate XIII) with a long inscription which can be read in slightly modernised form as 'Orm, Gamel's son, bought St. Gregory's minster when it was all ruined and fallen down, and he caused it to be built new from the ground in the days of Edward and in the days of Tosti the Earl. This is the day's sun marker at each hour. Haworth made me and Brand, priests'. The date of this work is thus between A.D. 1055 and 1064. There are two fine grave slabs and some fragments of pre-Conquest carving preserved in the church.

LASKILL. A farm in Bilsdale, where there is a seventeenth century Quaker meeting house and the remains of a mediaeval monastic grange.

LASTINGHAM. A pretty village charmingly situated in a hollow on the broad ridge between Rosedale and Farndale. The unique church is on the site of Bishop Cedd's monastery, A.D. 660, which was destroyed by the Danes in the ninth century. There is a finely preserved crypt, built between 1078 and 1088 when Stephen of Whitby founded a new monastery on the site. There are several Anglo-Danish sculptures and other features of interest in the church and village.

LEVISHAM. A small one-street village with a long green, on the ridge to the east of Newton Dale and half a mile off the Whitby to Pickering road. A very steep hill leads down from the village to a water mill and the small church, where there are some pre-Conquest carvings. Levisham Moor has many very interesting earthworks and tumuli and can be crossed on a good path to the Hole of Horcum. Staindale and the Allerston Forest are within easy reach.

LILLA HOWE and LILLA CROSS. On Fylingdales Moor. In 626 the attempted assassination of King Edwin was prevented when the king's minister, Lilla, interposed his own body and was killed instead. Lilla was buried in the Bronze Age howe, with several gold rings, gold brooch, silver ornaments and some filigree work. The cross, erected to mark the place, was removed when this

became a military training area to the junction of the Goathland and Beck Hole roads at Sil Howe but is now back again in its proper place. The very ancient track, Old Wife's Trod goes past Lilla Howe.

LYTHE. This village commands a wonderful view of Whitby. The restored church in a fine position, has a wealth of pre-Conquest carvings. Mulgrave Woods and Castle may be entered from Lythe Bank. An old centre of the alum industry (see page 57).

MOUNT GRACE PRIORY. The monastery of Mount Grace is one of the best surviving Carthusian foundations in Britain. Lay brethren did the harder work of the house and the monks were housed in solitude in individual cells. The house was founded in 1398 with a small church placed between two cloisters. The north one, on three sides, has 16 cells, small two storey buildings with a little enclosed garden for each cell—on the ground floor (now all that remains) there was a study and bedroom and on the first floor a workroom. Round the church is grouped the Chapter House and Frater, the Prior's house and the kitchens, these making with five more cells, a small second cloister on the south of the church. It is now in the care of the Ministry of Public Building and Works and open to the public. The present large residence was part of the Priory's Guest House.

MULGRAVE and MULGRAVE CASTLE. Mulgrave Castle, the eighteenth century home of the Marquis of Normandy, with a few cottages, stands in the lovely valley running inland from Sandsend and East Row on the coast. Two miles up the valley in the Mulgrave Woods and on a ridge between the parallel East Row and Sandsend Becks, the remains of the early castle occupy nearly the whole available position between the two ravines. On the north side, the walls are on the precipitous edge above Sandsend Beck, on the east there is a ditch with a strong tower on the edge of it; the chief gateway was on the west with a moat and drawbridge. The main building is 66 feet square with the remains of round towers at the corners. The castle was dismantled in 1647. The newer house was built by the Duchess of Buckingham about 1735.

NEWTON DALE. A deep, narrow gorge of glacial origin, running from the head of the Murk Esk valley to the Vale of Pickering. This was a channel cut by the waters overflowing from the lake which filled Eskdale during a late stage of the Ice Age, dammed up by the ice moving down the coast from the Tees and further north. This natural cutting was used by George Stephenson when planning the line of the Pickering to Whitby railway in 1836.

OLD BYLAND. Four miles from Byland Abbey and two from Rievaulx, this is a small village with numerous roads and walks in all directions, and close to the lovely Rye Dale and the smaller Caydale. The monks from Furness Abbey settled here for a time before moving to Byland Abbey. There is a quaint church with good Norman work in it—winged dragons with knotted tails being on the tower masonry. A Saxon sundial on the east wall of the tower is upside down; it is inscribed 'Huscarl made me for Sumerlethi'. The Norman chancel arch has some interesting capitals.

OSMOTHERLEY. Formerly an important market town, now an old fashioned village. A market cross and stone table, and an interesting church make the village centre. The church has fragments of ancient crosses and a tenth century 'hog back' gravestone (see page 42) in the porch, and a fine Norman doorway. The road over the moors by Slape Stones to Hawnby and Rye Dale provides a good approach to Black Hambleton and to a great extent of moors.

POCKLEY. Near Helmsley, a village with several thatched cottages.

RALPH CROSS. On Westerdale Moor at the junction of many ancient ways, and at the summit of a pass at 1409 feet OD (Plate XVI—see page 43). Roads meet here from Eskdale to Rosedale, over Blakey Ridge to Hutton-le-Hole and Gillamoor, and one to Farndale. There are three crosses within a few score yards, Ralph Cross (an eighteenth century replacement), nine feet high with a hollow in the top in which an old custom says that the traveller should leave a coin for the benefit of poor pilgrims; Young Ralph Cross to the west, and Fat Betty, with ancient base and original head, a few hundred yards down the Rosedale road. Close to the road is a memorial to the Cleveland naturalist and archaeologist Frank Elgee.

RIEVAULX ABBEY. One of the finest monastic ruins in the north, in Rye Dale two miles from Helmsley (Plates XVIII & XIX). The most impressive view of the Abbey is got from Rievalux Terrace, a remarkable and very beautiful piece of landscape gardening finished in 1758, on the brow of the valley, and with a lawn half a mile long, embellished with two classic temples. The abbey was the first Cistercian house in the north of England, founded in A.D. 1132, and was the mother house of Melrose and of Warden (Beds). There are the remnants of two canals constructed for the carriage of materials to the site during the building. The nave is the earliest large Cistercian nave in Britain and the choir is one of the finest examples of thirteenth century work still

standing. The extensive monastic buildings are well preserved. The whole is in the care of the Ministry of Public Building and Works who publish an excellent guide. The village church was formerly the monastic Gatehouse chapel. There is a good eighteenth century bridge.

ROBIN HOOD'S BAY. A strikingly situated fishing village on the steep cliff face at the northern end of a beautiful bay (Plate XXVII). The houses appear to be built almost on top of one another with flights of steps in place of streets. The bay has a foreshore made unusual by the extensive reefs of rocks, and extends three miles to the South Cheek. A famous place of geological interest and for fossil collecting.

ROSEBERRY TOPPING. A conspicuous conical hill isolated from the north-west corner of the Cleveland Hills. The summit provides wide views over the Cleveland Hills and across Teeside to the sea. The peculiar sharp pointed shape has been emphasised by quarrying and by landslip. It is the site of an ancient beacon.

ROSEDALE ABBEY. A small hamlet in the middle of Rosedale and the site of the twelfth century nunnery of which only a few fragments now remain near the church. Rosedale has been the scene of ironmaking since monastic times (see page 59). A good place from which to explore the central mass of moorlands. Rosedale Chimney is a famous landmark.

RUNSWICK BAY. An old fishing village in the north-west corner of an attractive bay, now a popular holiday resort. The bay has fine sands extending to the east point, Kettle Ness.

RYE DALE. A name sometimes used as an area name and then including the smaller dales of Riccal Dale, Bransdale, Kirk Dale, Farndale and Rosedale, whose streams are tributary to the river Rye. Best explored from Helmsley. The Rye continues through the broad Vale of Pickering to its junction with the Derwent.

SALTERGATE. The old salt carriers' way crossing Fylingdales Moor from Whitby to Pickering, and used through many centuries for the dispersion of the salt from coastal salt pans. It is also the name of a well known inn near the Hole of Horcum.

SPOUT HOUSE. In Bilsdale, has a mediaeval inn, 'the Sun Inn'. It has suffered little by restoration and is the best remaining example of a fifteenth century cottage in the Park.

STAITHES. A remarkable one time fishing village set in the cleft of Roxby Beck and quite unique (Plate IV). The old part of the village is unspoiled. Captain James Cook was apprenticed with a grocer here, about 1740.

SUTTON BANK. The famous climb on the Thirsk to Helmsley road.

From Sutton-under-Whitestone Cliffe the road mounts with an almost alpine zig-zag, some 500 feet in half a mile. The summit affords a magnificent view across the Vale of York to the Pennines. Below and a little to the north-west is Gormire, a natural lake formed partly by landslip impounding the drainage. Roulston Scar to the south is a still better view point, and is the headquarters of the Yorkshire Gliding Club. The remains of Cooper Cross and Casten Dike are close to the road at the top of the bank, and there is excellent walking along the drove road.

THORNTON DALE. On the Pickering to Scarborough road; a straggling village with a pleasant green, with stocks and market cross, an old grammar school and alms houses. A good stream runs through the village and the many small bridges give a quaint air to the green. A gateway to Dalby and Staindale Forests and to to the lovely Thornton Dale.

WESTERDALE. A charming valley of the youthful Esk. Westerdale Lodge, a romantic Victorian shooting box is now a Youth Hostel. Close by is Hunters' Stee, a mediaeval packhorse bridge with ribbed understructure. In Westerdale there was a preceptory of the Knights Templars. The church is early nineteenth century but with some older fragments.

WHORLTON. The old village above Swainby has been abandoned, only the ruins of the church and castle remaining to mark the site. The castle has a strong position in the entrance to Scugdale and commanding much of the scarp of the Cleveland Hills. There is a large motte 200 feet by 170 feet with a bailey of $2\frac{1}{2}$ acres. It was the site of a Norman wooden palace-keep, replaced later by a tower house and a magnificent gatehouse.

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APPENDIX I

Scheduled Ancient Monuments in the North York Moors National Park[1]

1 *in O.S. Tourist Map Grid Reference.*

BURIAL MOUNDS AND MEGALITHIC MONUMENTS

Aislaby and Egton, Swarth Howe, round barrow and two adjacent round barrows on Dunsley Moor	842090-843087
[2]Allerston, round barrow in Black House Plantation	891857
Allerston and Ebberston, Givendale long barrow	893862
Appleton le Moors, two round barrows on Low Common	725861
Bilsdale Midcable and Great Busby, round barrows on Green Bank	522031
Boltby, three round barrows on Hambleton Down	511853
Boltby, three round barrows within earthwork on Boltby Scar	506856
Cloughton and Harwood Dale, stone circle and two groups of round barrows on Standingstones Rigg	979971-981969
[2]Cloughton, round barrow 1 mile S. of Cloughton Moor Cottages, Cloughton Plantation	995965
Danby, Pind Howes and Wolf Pit, round barrows, Danby High Moor	705042, 705037
Danby and Glaisdale, two round barrows on Danby Beacon	735093
East Ayton and Irton, circle (site of) and round barrows, Irton Moor	993873-002870
Egton, round barrows on In Moor, Struntry Carr	805030
Egton, two round barrows E. of Coopers Quarries	837079
Egton, round barrows on Egton High Moor	778035
Egton, two round barrows ¼ mile N.E. of Horse Mire Head Farm	823077
Eskdaleside-cum-Ugglebarnby, Breckon Howe round barrow, Sleight's Moor	854034
Eskdaleside-cum-Ugglebarnby, Flat Howe, two round barrows, Sleight's Moor	856049
Eskdaleside-cum-Ugglebarnby, Greenland's Howe, round barrow, Sleight's Moor	869035
Eskdaleside-cum-Ugglebarnby, group of round barrows on E. side of Sleight's Moor	867042
Eskdaleside-cum-Ugglebarnby, High Bride Stones	851046
Eskdaleside-cum-Ugglebarnby, Low Bride Stones	846049

[1]Listed by names of Parishes in which they are located, not as named in the text or index.
[2]Crown or Duchy property not in charge of the Minister.

Eskdaleside-cum-Ugglebarnby, Pen Howe, round barrow and adjacent round barrow, Sleight's Moor	857037
Eston, round barrows on Eston Moor	569180-570180
Farndale East and Rosedale West, Blakey Howe and Little Blakey Howe, round barrows	679998, 680994
Farndale East and Westerdale, Flat Howe and South Flat Howe, round barrows, Farndale Moor	673013, 666005
Fylingdales, group of round barrows S.E. of Foul Sike Farm	918020
Fylingdales and Hawsker with Stainsacre, Blea Hill Howe, round barrow, Fylingdales Moor	903010
Fylingdales and Hawsker with Stainsacre, Goathland and Sneaton, Louven Howe, round barrow	887992
Fylingdales and Hawsker with Stainsacre, group of round barrows, Howdale Manor	951010-958010
Fylingdales and Hawsker with Stainsacre, Jugger Howes, round barrows, Fylingdales Moor	942998-944002
Fylingdales and Hawsker with Stainsacre, Latter Gate Hills, round barrows	924045
Fylingdales and Hawsker with Stainsacre, Old Wife's Neck, Grey Heugh Slack	902022
Fylingdales and Hawsker with Stainsacre, Robin Hood's Butts and adjacent group of round barrows, Brow Moor	955022-967014
Fylingdales and Hawsker with Stainsacre, round barrows on Hamilton, Fylingdales Moor	923054
Fylingdales and Hawsker with Stainsacre, round barrows on Low Moor	911038-906035
Fylingdales and Hawsker with Stainsacre, round barrows S. of Louven Howe, including Lilla Howe	889988
Fylingdales and Hawsker with Stainsacre, standing stone and round barrow, Standing Stones Rigg	920038
Fylingdales and Hawsker with Stainsacre, Stony Marl Howes, round barrows and circle on Stony Marl Moor	946005-962007
Fylingdales and Hawsker with Stainsacre, Thorn Key Howes, circle and round barrows	915033
Fylingdales and Hawsker with Stainsacre, two round barrows on Greystone Hill	913042
Glaisdale, Brown Rigg Howe, round barrow	745095
Glaisdale, Rawland Howe, round barrow and four round barrows on Lealholm Rigg	755094
[1]Goathland and Sneaton, Ann's Cross, round barrow	878002
[1]Goathland and Sneaton, Foster Howes, round barrows	874010
[1]Goathland and Sneaton, Robbed Howe, round barrow	869019
[1]Goathland, Widow Howe round barrow on Widow Howe Moor	860000
Great Ayton, round barrows E. of Ayton Banks Farm	593115, 593120

[1]Crown or Duchy property not in charge of the Minister.

BURIALS MOUNDS AND MEGALITHIC MONUMENTS (*contd.*)

Guisborough, round barrows on Guisborough Moor N. of Penrod Hill	625137-626136-625132
Harwood Dale, Penny Howe, round barrow, Harwood Dale Moor	963991
Harwood Dale, Pye Rigg Howe, round barrow and six round barrows S.S.E. of it, Harwood Dale Moor	967000-972991-970995
Harwood Dale, round barrow 2 mile N.E. of Kaesbeck	968965
Helmsley, Laskill Pasture and Bilsdale Midcable, three round barrows on Helmsely Moor	584929, 587930, 591923
Hutton Buscel, round barrows in and adjacent to California Belt	958873
Hutton Buscel, group of round barrows on Coombe Hill	953893
Hutton Buscel, Loft Howe, round barrows W. of Great Moor Road	950891-956877
Hutton Buscel, round barrows and circle E. of Great Moor Road	963885
Hutton Buscel, stone circle and three round barrows on Shortage Hill	956891-962890
[1]Levisham, round barrow on Ness Head	829889
Lockton, three round barrows E. of Gallows Dike	848942
[1]Pickering, round barrow 300 yds. N. of High Blansby	829878
[1]Pickering, four round barrows N.W. of High Blansby	820880
Scarborough and Seamer, Seamer Beacon, round barrow and group of round barrows on Seamer Moor	010876-997878-011872
Scawton, round barrows in Duncombe Park	583820-560823-565820 570822-583823-584822
[1]Sneaton, York Cross, round barrow	879016
Staintondale, Beacon Howes, round barrows	973012-974011
Staintondale, Brown Rigg, round barrow 350 yards W. of Tofta Farm	978985
Staintondale, Burnt Howe, round barrow	987012
Staintondale, round barrow 400 yards W. of Springfield Farm	976006
Staintondale, round barrow 400 yards S.E. of Rudda Cottages	983991
Staintondale, Rudda Howes, round barrows	976998
Staintondale, three round barrows S. of Raven Hill	978010-979010
Suffield cum Everley and Silpho, round barrow on Suffield Moor	975928
Ugthorpe, three round barrows S.W. of High Park Farm	782104, 779101
Upsall, round barrow, (earthworks) on Mount Pleasant	558165
Wilton, Court Green Howe, round barrow	558184
Wilton, round barrows on Wilton Moor	576181-577181
Wykeham, stone circle and round barrows on Wykeham Low Moor	942880-952877

[1]Crown or Duchy property not in charge of the Minister.

CAMPS AND SETTLEMENTS

Ampleforth, Studford Ring	582799
Boltby, promontory camp on Boltby Scar	506856
Egton, enclosure on In Moor, Struntry Carr	807026
Eston and Wilton, Eston Nab Camp	568183
Hutton Buscel, rectangular enclosure on Coombe Hill	953893

ROMAN REMAINS

[1]Egton, Roman road on Wheeldale Moor	802970-812988
Lythe, Roman signal station at Scratch Alley, near Goldsborough	836151
Pickering and Cawthorne, four Roman camps above Cawthorn Banks	785901

LINEAR EARTHWORKS

Ampleforth, Double Dikes on Painter Rigg	578803
Ebberston and Snaiton, Scamridge Dykes	882852-915867
Egton, intrenchments on Egton High Moor	778035
Fylingdales and Hawsker with Stainsacre, earthworks on Grey Heugh Slack	904022
Fylingdales and Hawsker with Stainsacre, earthwork on Howdale Moor	955012
Fylingdales and Hawsker with Stainsacre, earthworks across Robin Hood's Bay Road on Fylingdales Low Moor	923047
Fylingdales and Hawsker with Stainsacre, earthworks on Stoney Marl Moor	962007
Hutton Buscel, earthwork E. of Great Moor Road, Hutton Buscel Moor	955875-957876
Hutton Buscel, Moor Dike and earthworks E. of Great Moor Road, Hutton Buscel Moor	958876-962875
Levisham and Lockton, Gallows Dike	847942
Lockton, Double Dike on Saltergate Brow	858944
Scarborough and Seamer, earthworks on Seamer Moor	006883-013870
Staintondale, Green Dike	971008
Suffield cum Everley and Silpho, Thieves Dikes	975928

ECCLESIASTICAL BUILDINGS

[2]Byland-with-Wass, Byland Abbey	550790
East Harsley, Lady's Chapel	455983
[2]East Harsley, Mount Grace Priory	450986
[2]Guisborough, Guisborough Priory	616160
[2]Rievaulx Abbey	577850
Wykeham Priory	962819

[1]Crown or Duchy property wholly or partly in the charge of the Minister.
[2]Monuments wholly or partly in charge of the Minister under the provisions of the Ancient Monuments Acts.

CROSSES

Danby, Botton Cross, Danby High Moor	698020
Danby, White Cross (Fat Betty) Danby High Moor	682020
Fylingdales and Hawsker with Stainsacre, Postgate Cross	918044
Glaisdale, Stump Cross	745095
Hawsker with Stainsacre, Hawsker Cross	921073
Helmsley, cross shaft on Helmsley Moor	591923
Kildale, Percy Cross on Percy Cross Rigg	606118
[1]Lilla Cross	889987
[1]Pickering, Mauley Cross, Pickering Moor	797944
Sneaton, John Cross	901027

CASTLES

Brompton by Sawdon, Castle Hill	945822
Cropton, T'Hall Garth, motte and bailey castle	755894
[2]Helmsley Castle	611836
Kilton Castle	703176
Lythe, Mulgrave Castle	840117
West Ayton, Ayton Castle	987851
Whorlton Castle	481024

OTHER SECULAR SITES AND BUILDINGS

Cloughton, moated mound ⅓ mile N. of Linglands Farm	987969
Laskill Pasture, mediaeval site at Laskill	563907
[2]Rievaulx, deserted village of Griff	584838
Seamer, site of Manor House	013834
Sinnington, Old Manor House	746861

BRIDGES

Danby, Duck Bridge	719078
Glaisdale, Beggar's Bridge	784055
Helmsley Bridge	614835
Westerdale, Hunter's Sty Bridge	662062

[1]Crown or Duchy property not in the charge of the Minister.

[2]Monuments wholly or partly in charge of the Minister under the provisions of the Ancient Monuments Acts.

APPENDIX II

Some Useful Addresses

ANGLING

Cod Beck Reservoir, Osmotherley	Apply to Northallerton and District Water Board, 72, High Street, Northallerton.
Rivers:	
Derwent	For AYTON apply to Post Office, West Ayton.
	For (below) EAST AYTON apply to F. M. Bardsley, Low Mill Farm, East Ayton, near Scarborough.
	For EVERLEY apply to The Everley Hotel, Hackness.
	For HACKNESS apply to The Grange Hotel, Hackness.
	For LANGDALE END apply to Appleton and Day, Huntriss Road, Scarborough, Pritchards, Eastborough, Scarborough.
Esk	For CASTLETON apply to Station Hotel, Castleton.
	For DANBY apply to Duke of Wellington Inn, Danby.
	For EGTON BRIDGE apply to Horseshoe Hotel, Egton Bridge.
	For GLAISDALE apply to Estate Office, Glaisdale.
Murke Esk	For GOATHLAND and GROSMONT apply to D. C. Cook, 21, High Terrace, Glaisdale.
Riccal	Down to the HELMSLEY KIRKBYMOORSIDE ROAD BRIDGE apply to Duncomb Park Estate Office, Helmsley.
Rye	For BOW BRIDGE, GREENCLIFFE WOOD and SKIPLAM apply to Duncomb Park Estate Office, Helmsley.
	For ARDEN LAKE AND HAWNBY apply to Hawnby Hotel, Hawnby.

AUTOMOBILE ASSOCIATION

Headquarters: Fanum House, New Coventry Street, LONDON, W.1.
York Area: Fanum House, Tadcaster Road, YORK.

CAMPING CLUB OF GREAT BRITAIN AND IRELAND

Headquarters: 11 Lower Grosvenor Place, LONDON, S.W.1.
Regional Secretary: A. J. Pringle, 34, Salter's Avenue, Haughton le Skerne, DARLINGTON.

CARAVAN CLUB OF GREAT BRITAIN AND IRELAND

Headquarters: 46, Brook Street, LONDON, W.1.
North Yorkshire Group: Hon. Sec.: D. R. Alder, 56, Gunnergate Lane, Marton, MIDDLESBROUGH.

CENTRAL COUNCIL OF PHYSICAL RECREATION

Headquarters: 26/29, Park Crescent, LONDON, W.1.

CO-OPERATIVE HOLIDAYS ASSOCIATION

Headquarters: Birch Heys, Cromwell Range, MANCHESTER, 14.
Centre: The Abbey House, WHITBY, Yorks.
Middlesbrough Area: Hon. Sec.: J. Christensen, 29, Ambleside Grove, Acklam, MIDDLESBROUGH.

COUNCIL FOR THE PRESERVATION OF RURAL ENGLAND

Headquarters: 4, Hobart Place, LONDON, S.W.1.
Cleveland Branch
Hon. Sec.: Alec Wright, West End, Stokesley, MIDDLESBROUGH.
Ryedale Branch
Hon. Sec.: Miss M. L. McDougall, APPLETON-LE-MOORS, Yorks.
Scarborough and Pickering Branch
Hon. Sec.: Mrs. C. D. Robertson, Beck Isle, Thornton-le-Dale, PICKERING.
Whitby and District Branch
Hon. Sec.: J. W. F. Jameson, Hedgefield, Coach Bank, Sleights, WHITBY.

FORESTRY COMMISSION

Headquarters: 25, Savile Row, LONDON, W.1.
North East Conservancy: Briar House, Fulford Road, YORK.

FRIENDSHIP HOLIDAYS ASSOCIATION

Headquarters: Beechwood Court, HARROGATE, Yorkshire.

GLIDING

National: *British Gliding Association*, Londonderry House, 19, Park Lane, LONDON, W.1.
Local: *Yorkshire Gliding Club*, Sutton Bank, THIRSK, Yorkshire.
Newcastle Gliding Club, Carlton Moor, near STOKESLEY.

HOLIDAY FELLOWSHIP LIMITED

Headquarters: 142, Great North Way, Hendon, London, N.W.4.
Middlesbrough Area: Hon. Sec.: J. Christensen, 29, Ambleside Grove, Acklam, Middlesbrough.

NATIONAL PARKS COMMISSION

1, Cambridge Gate, Regent's Park, London, N.W.1.

NATIONAL TRUST

Headquarters: 42, Queen Anne's Gate, London, S.W.1.
North Eastern Area Office: Cambo, Morpeth, Northumberland.
Properties in the Park

Bridestones Moor:	837 acres some 2 miles north-east of Lockton.
Mount Grace Priory:	6 miles north-east of Northallerton. Admission 6d., children 3d.
Saltwick Nab:	7½ acres of cliffland one mile east of Whitby.
Scarth Wood:	257 acres of moorland between Osmotherley and Swainby near the Cleveland Hills.

NATURAL HISTORY SOCIETIES

Cleveland Naturalists' Field Club
Hon. Sec.: B. Tinkler, 19, Newham Crescent, Marton, Middlesbrough.
Darlington and Teesdale Naturalists' Club
Hon. Sec.: T. N. Scaling, 17, West Auckland Road, Darlington.
Harrogate and District Naturalists' Scientific Society
Hon. Sec.: Major C. Worrin, T. D., White Gates, 151, Leeds Road, Harrogate.
Scarborough Field Naturalists' Society
Hon. Sec.: Miss K. P. Wrightson, 33, Falsgrave Road, Scarborough.
Whitby Field Naturalists' Club
Hon. Sec.: Miss M. C. Walker, Oversley Garth, Lowdale Lane, Sleights, Whitby.
York and District Field Club
Hon. Sec.: Mrs. J. Payne, West Dene, Manor Heath, Copmanthorpe, York.
Yorkshire Naturalists' Tryst
Hon. Sec.: C. J. Smith, 7, Malton Way, Clifton Without, York.
Yorkshire Naturalists' Union
Field Sec.: Miss C. M. Rob, Catton Hall, Thirsk.
Yorkshire Philosophical Society
Hon. Sec.: Mrs. Mackenzie, The Yorkshire Museum, York.

NATURE CONSERVANCY

Headquarters: 19, Belgrave Square, London, S.W.1.

NORTH YORK MOORS
NATIONAL PARK PLANNING COMMITTEE

Offices: County Hall, Northallerton. Tel. 168.
Head Warden: Sutherland Cottage, Cropton, Pickering, Yorkshire.

RAMBLERS' ASSOCIATION

Headquarters: 124, Finchley Road, London, N.W.3.
North Riding and South Durham Area: Hon. Sec.: W. R. Bradburn, 16, Cleveland Avenue, Darlington.

ROYAL AUTOMOBILE CLUB

Headquarters: 85, Pall Mall, London, S.W.1.
Leeds Office: 34, Regent Street, Leeds, 2.

WORKERS' TRAVEL ASSOCIATION

Headquarters: Eccleston Court, Gillingham Street, London, S.W.1.

YOUTH HOSTELS ASSOCIATION

Headquarters: Trevelyan House, 8, St. Stephen's Hill, St. Albans, Herts.
Wear, Tees and Eskdale Regional Office[1]
Sec.: Miss A. Watson, 3, Cambridge Road, Middlesbrough, Yorks.
York, Scarborough and Hull Regional Office[2]
Sec.: D. Crossfield, Derwent Bank, Malton, Yorks.

Hostels in or near the Park

[2]Boggle Hole (Robin Hood's Bay)	(T.A. 954040):	The Warden, The Youth Hostel, Boggle Hole, Fyling Thorpe, Whitby, Yorks.
[2]Helmsley	(S.E. 616840):	The Warden, The Youth Hostel, Helmsley, Yorks.
[2]Malton	(S.E. 777711):	The Warden, The Youth Hostel, Derwent Bank, Malton, Yorks.
[1]Saltburn	(N.Z. 662206):	The Warden, Riftswood Hall, Victoria Road, Saltburn-by-Sea, Yorks.
[2]Scalby Mills (near Scarborough)	(S.E. 026907):	The Warden, The Youth Hostel, Burniston Road, Scarborough, Yorks.

[2]Staindale (near Lockton)	(S.E. 870903):	The Warden, Bridestones Hostel, Low Staindale, Lockton, Pickering, Yorks.
[1]Westerdale (Upper Eskdale)	(N.Z. 662060):	The Warden, Westerdale Hall, Westerdale, Whitby, Yorks.
[2]Wheeldale Lodge	(S.E. 813983):	The Warden, Wheeldale Lodge, Goathland, Yorks.
[1]Whitby	(N.Z. 902112):	The Warden, The Youth Hostel, East Cliff, Whitby, Yorks.

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GUARD AGAINST ALL RISK OF FIRE

Every year costly damage is done by fire to crops, plantations, woodlands and heaths. Picnic fires not properly put out are one cause. A cigarette thrown away or a pipe carelessly knocked out can start a raging inferno. Be careful—a spark may do terrible damage and destroy a lifetime's work.

FASTEN ALL GATES

Animals, if they stray, can do great damage to crops and to themselves too. Tuberculosis-tested cows may mix with others and become infected. Wandering animals are a menace to themselves and to others on country roads. Even if you find a gate open, always shut it after you.

KEEP DOGS UNDER PROPER CONTROL

It is natural for a dog to chase anything that will run. Keep yours out of temptation's way. Animals are easily frightened. The chasing of a ewe or cow may mean the loss of valuable young. Town-bred dogs run great risks from traffic in narrow roads. When near animals or walking along the road, keep your dog on the lead, if he cannot be kept under close control.

KEEP TO THE PATHS ACROSS FARMLAND

Crops are damaged by treading at any stage of growth. Patches of flattened corn in a field make it difficult to harvest. Grass also is a valuable crop, remember. So please walk in single file on field paths. This keeps the track well defined and saves the crop on either side.

AVOID DAMAGING FENCES, HEDGES AND WALLS

If you force your way through a fence or hedge, you will weaken it. Where a man has gone an animal may follow. Stones from walls rolled down slopes may injure people and animals, destroy fences, and damage crops or machines. Use gates and stiles.

LEAVE NO LITTER

All litter is unsightly. Broken glass, tins and plastic bags are dangerous; they very easily maim livestock. Tins, bottles and stones in fields damage costly machinery. This may hold up work which is vital to finish while the weather holds. So take your picnic remains and other litter home with you.

SAFEGUARD WATER SUPPLIES

Water is precious in the country. Never wash dishes or bathe in somebody's water supply or foul it in any other way, or interfere with water-troughs set for cattle.

PROTECT WILD LIFE, WILD PLANTS AND TREES

Wild flowers give more pleasure to more people if left to grow. Plants should never be uprooted. Trees are valuable as well as beautiful: if they are damaged their health and beauty is harmed. Birds and their eggs, animals, plants and trees, should be left alone.

GO CAREFULLY ON COUNTRY ROADS

Country roads have special dangers. Blind corners, hump-backed bridges, slow-moving farm machinery and led or driven animals are all hazards for the motorist. Walk carefully, too. It is generally safer to walk on the right, facing oncoming traffic.

RESPECT THE LIFE OF THE COUNTRYSIDE

The life of the country centres on its work. While you are there, try to fit in. The countryman has to leave his belongings in the open; roads and paths run through his place of business, and the public are on trust. His work often involves hard labour. He has to keep early hours. So make as little noise as possible when you pass through his village in the evening. Be considerate, leave things alone, and so repay the local people for the pleasure their countryside has given you.

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